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ABSTRACT

This ethnographic, longitudinal study investigates the home literacy experiences of low income children to gain insight into why such children generally do not learn to read and write as well as middle class children. Participating were 24 children, approximately 2.5 to 3.5 years of age, in groups equally divided by sex. Subjects were from three ethnic groups: Anglo-, Black-, and Mexican-American. To identify the sources of those life experiences leading to the development of literacy, extensive naturalistic home observations were made for periods ranging from 3 to 18 months. Observer-participants taking field notes described literacy events, specifically focusing on actions, the contexts of events, participants, co-occurring/alternating events, reasons events ended, and subsequent activities. Over 1,400 literacy events were recorded and analyzed; both qualitative and quantitative analyses were made. In the quantitative analysis, the independent variable was ethnicity. The literacy event, the original dependent variable, was differentiated into two quantitative and three qualitative components. Quantitative components included duration and frequency of literacy events; qualitative components were participant structure, lesson content, and context. Many transcriptions of literacy events are provided in the text, and results and their implications are extensively discussed. A coding manual, the Literacy Event Observation System, is appended. (RH)

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FINAL REPORT

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Literacy Resources: How Preschoolers Interact with Written Communication

NIE-G-79-0135

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PS 013980

Introduction

For the past three years my colleagues and I have been conducting a study of literacy in homes where young children live. We got into this line of work because it promised to answer some questions that have bothered educators as well as parents for a long time. We know from a variety of sources that parents who read to their kids and have a lot of books around the house are likely to have children who are successful in school. In fact, knowledge of the alphabet is one of the best predictors that an entering first grader will learn how to read a what the school considers a reasonable standard. We also know that parents who interact with their children in a supportive, yet non-directive way in specially constructed problem environments are likely to have children who score relatively high on standardized tests, which in turn are our standard means of predicting school success (e.g. Almy, 1949; Sheldon & Carrillo, 1952; Wells & Raban, 1978; Wells, 1981). This pattern of results suggests that there is a causal connection between literacy experiences in the home prior to beginning school and school success.

There are two major flaws in our knowledge about the importance of early encounters with print. The relevant data are largely correlational and observational, leaving causal claims open to "third variable" explanations (e.g., parental and child IQ's for example). This is an important problem, but not the one that our work has been aimed at. We are willing to grant that it is a good thing in our society for parents to interact with young children around print, even if correlations with predictor variables can be faulted. However, we want to know more about what kind of good thing early literacy is. At the moment we have only the presumed efficacy of reading aloud and general

exposure to print as mediating mechanisms for early exposure to print. We know almost nothing about the frequency of reading events other than story time in systematic ways. Yet, it seemed unreasonable to assume that story book reading is the young child's only exposure to print. Our experience as children and parents belies that notion. Moreover, we have no reason to expect that storybook reading will be equally representative of literacy experiences in all homes.

This uncertainty about the range of literacy activities that characterize people's everyday lives at home produces corresponding uncertainty concerning social policies intended to increase students' achievements through home intervention. Should we aim solely at increasing prescribed forms of activity (story reading for example) or attempt to modify mother-child interaction in some general manner? And how, whatever our aims, can they be implemented in an era when government intervention in the home lives of citizens is idealogical anethema?

We decided to confront these issues directly by arranging to spend significant amounts of the time in the homes of a selected number of low-income families in the San Diego metropolitan area. We focused on homes where there were very young children (ages 2-4) in our study as a way of finding out what the pre-preschool print-related experiences might be.

We went into these homes accompanied by a good deal of uncertainty and some prior conceptions. We were particularly interested in the range, structure and frequency of <u>different</u> literacy events. We were aware of the correlational data linking home and school success, which we used as a kind of background of common wisdom. What we wanted to know was whether there were

kinds of literacy experiences other than story reading that provide systematic and theoretically useful sources of learning about print. We were also very sensitive to the way in which patterns of literacy related to the total configuration of people's lives. Could we identify outside sources of literate activity (church, school, governmental documents)? Would there be any groupings of activities that might lead us to identify cultural elements in the organization of literate practice? We were, in effect, attempting to build a broader notion of literacy practice in the home to be used in future quantitative work either as independent variables (to predict school success) or as dependent variables (to measure the effect of some intervention).

II. Method

Our goal in this research was to describe the home literacy experiences of twenty-four low-income children so that we might gain some insight into why such children, as a group do not succeed as well as their middle class counterparts in learning to read and write. We reasoned that observation of the children and their families as they went about their everyday activities would be the best way of developing accurate and detailed descriptions of the literacy in the children's lives.

Self-report interviews would not be sufficient to accomplish our purposes. With interviews not only is there the problem of parents giving socially acceptable answers (a problem which can be circumvented to some extent by disguising the purpose of the interview and designing the interview such that there are double checks on the reliability of the interviewee's responses). A more fundamental problem with using an interview technique to gather information on children's preschool literacy experiences is that so

often reading and writing events are such integral aspects of the stream of everyday activities that they are not recognized as literacy by the adults in the home (and thus are not recalled during an interview). We were interested not just in well-marked literacy events like story reading or homework but in the entire range of reading and writing experiences the children had. Additionally, we wanted to observe the children's activity when they were alone. As parents may be engaged in some other task while the child is 'writing' or looking at a book or involved with an older sibbling in a literacy event, they often miss these aspects of the child's literacy experience. Thus, much of what the children do and what the adults themselves do can go unreported unless someone has been trained to observe the reading and writing which occur in the child's life.

The approach employed in this research, then, was to conduct extensive observations in the homes of low-income families with preschool children. The observations were used to develop descriptions of the nature, aims, and functions of and values attached to literacy in the families.

It was important that the observations be conducted over an extended period of time. The reasons for this were two-fold. First of all, in order to make claims about the literacy environment of the home, it was necessary to sample the activities adequately. It takes time to get a 'feel' for (as well as a quantitative assessment of) the daily literacy activities of the homes. It was important to observe during different times of the day as well as different days of the week so that an overall picture of the different phases of family life might be developed. Therefore, we needed to spend an adequate amount of time in the homes to get this picture developed.

At the time this study began, there were few guidelines we could draw upon in conducting our observations. Since no comparable research had been done previously we could not predict how many hours of observation would be required. Therefore, we wanted to give ourselves ample time to understand the literacy of the home.

A second reason for conducting longitudinal rather than intensive observations was our interest in changes over time. Because we viewed literacy as a social activity and literacy learning as a process of internalizing social relations, we were especially interested in the development in adult-child interactions involving literacy. Such development is what is happening in the move from interpsychological to intrapsychological functioning. According to Vygotsky's (1978) theory, the child would gradually assume more and more control over what had been jointly constructed activities. Only longitudinal observations would enable us to assess the applicability of this theory to literacy learning.

As it turned out there were also other changes over time for several of our families, changes which directly influenced the literacy environment of the home. Family separations, the birth of additional children, changes in employment status--all of these had substantial effects upon the literacy activities in certain of our families. Such happenings are part of the flow of reality for many families in our society, and thus the importance of observing longitudinally in order to understand the practice of literacy was reinforced.

Sample. The children studied were between approximately 2 1/2 and 3 1/2 years of age when they began to be observed. Children in this age range were chosen because, although initial encounters with print usually occur before this time, it is generally about this age that (1) children begin to explore reading and writing on a more extensive basis and (2) that the bulk of what will be their preschool literacy experiences begins.

As was mentioned above, we focused only on low-income sample because, as a group, these people tend not to achieve as well in reading and writing as their middle and upper class counterparts. Furthermore, we were extremely interested in how cultural background would affect the literacy activities to which the child would be exposed. We wished to examine the cultural practice theory of development (Laboratory of Comparative Human Cognition, 1981; in press) and to assess the feasibility of the notion of literacy as cultural practice (Anderson & Teale, 1981). Therefore, we included in the sample families from three different ethnic groups: Anglo, Black and Mexican-American.

Also, previous research has shown that girls' achievement in reading is higher than that for boys (Downing & Thackrag, 1975;). Therefore, we included equal number of boys and girls in the sample so that we might see if sex was a factor in determining the preschool literacy experiences of the children.

It is relevant at this point to discuss in some detail the sample selection procedures that were used to obtain subjects for the research. Our trials and tribulations can serve as useful instructions for others wishing to study the home literacy experiences of preschool children. Because we were interested in just that--home literacy--we wished to observe children who spent their time at home, in interaction with parents. We were not interested

in children who were in day care, nursery school, Head Start or other institutional situations. This does create some difficulties for subject selection. It is far easier to get cooperation of a school or day care center where there is a pool of children whose parents can be contacted about participating in the research. Our task was to find low-income families with preschool children who wanted to be involved in our project.

We started by contacting community agencies and organizations (Urban League, Chicano Federation, churches) to see if they could put us in contact with any appropriate families. This strategy yielded limited success. At the same time we began by 'hanging out' at locations like the Welfare Office where we reasoned we could make contact with low-income families. A few families were found in this way. Also we attempted to work at the institutional level with the Welfare Office to see if they could put families in touch with us. Unfortunately, we met with no success using this procedure.

Our two most useful strategies were the following. We contacted the Women's, Infants, and Children (WIC) Program, a program which provides nutritional advice and support for low-income families. They arranged for us to be able to deliver a brief talk on the project to the groups of mothers who came to their office. Then arrangements were made with interested mothers for a researcher to visit their home and explain to them the details of the project.

Our final strategy was perhaps our most productive. We canvassed what we knew to be low-income neighborhoods and delivered to each household a flyer on the project. It briefly described what we were interested in doing and invited parents to phone us at the university for additional information if they were interested in participating. When a family phoned, we would explain

the project in more detail and then arrange for a researcher to visit the home to talk with the family.

This whole procedure was a protracted one and points up the difficulties of finding subjects for extended naturalistic/observational research who are not associated with an institution like a school or day care center. In all, direct contacts with potential subject were most profitable, and we would especially employ the 'flyer approach' were we to begin another such project again.

Through these strategies 24 target children[1] and their families (8 Anglo,

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Insert Table 1 about here

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8 Black, 8 Mexican-American)[2] were included in the sample. Table 1 sets out information on the entire 24 families in the sample: the age and sex of the target child, the members of the family, and the occupations and educational levels of the parents.

Data Collection. Naturalistic observations of the children and their families were conducted for periods of from 3 to 18 months. Our main method of data collection was field notes. We also audio taped some interactions and used transcripts of these tapes to augment the field notes. As was mentioned

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1. The term target child is used to refer to the preschooler in the family who was the focus of the observations.

2. The term Mexican-American is used in the same way it was by Laosa (1977), referring to persons born in Mexico who now hold United States citizenship or otherwise live in the United States or whose parents or more remote ancestors immigrated to the United States from Mexico. It also refers to persons who trace their lineage to Hispanic forbears who resided within the Spanish or Mexican territory that is now part of the southwestern United States.

TABLE #1

Family Identifier Letter	A	B	C	D	E	F
Target Child (Age, Sex)	Mike (3.10, M)	Bobby (2.8, M)	Barbara (2.8, F)	Kristin (2.4, F)	Alex (2.6, M)	Becki (3.4, F)
Adults in Home (Age)	Father (22) Mother (22)	Father (44) Mother (42) Aunt (23) Uncle (25)	Father (44) Mother (42) Daughter (23) & Husband (25)	Father (24) Mother (22)	Father (25) Mother (25)	Mother (30)
Occupation of Parent(s)	Father - Air conditioning installer, plumber's helper; frequently unemployed	Father - Attendant at nursing home. Uncle - School custodian	Father - Attendant at nursing home. Uncle - School custodian	Father - Painter; frequently unemployed	Father - Marine	Mother
Siblings in Home (Age)	Sister (1.1)	Brother (18) Sister (13) Sister (11) Sister (2.8) Cousin (4.5)	Brother (18) Sister (13) Sister (11) Brother (2.8) Cousin (4.5)		Sister (5)	Brother (9) Brother (5.10) Sister (5.10)
Parental Education (Years)	F = 12 M = 12	F = 12 M = 11	F = 12 M = 11	F = 9 M = 12	F = 12 M = 12	M = 12
Ethnicity	Anglo	Anglo	Anglo	Anglo	Anglo	Anglo

TABLE #1

G	H	I	J	K	L	M
Paul (3.2, M)	Holly (3.7, F)	Myeesha (3.0, F)	Natalie (3.5, F)	Amin (2.8, M)	Denise (2.8, F)	Harvey (2.10, M)
Mother (28)	Father (30's) Mother (25)	Father (25) Mother (25)	Father (31) Mother (29)	Father (31) Mother (29)	Father (31) Mother (30)	Mother (27)
Mother - Supported through welfare	Father - Trash hauler; frequently unemployed	Father - Unemployed	Father - janitor	Father - Janitor	Father - Playground supervisor	Mother - Supported through welfare
Brother (5.1) Brother (2.0)	Sister (1.4)	Brother (0.3)	Brother (8) Sister (5) Brother (2.8)	Brother (8) Sister (5) Sister (3.5)	Sister (6.9)	Sister (0.11)
M = 12	F = 9 M = 12	F = 11 M = 12	F = 12 M = 12	F = 12 M = 12	F = 12 M = 12	M = 10
Anglo	Anglo	Black	Black	Black	Black	Black

TABLE #1

N	O	P	Q	R	S	T
David (3.9, M)	Alethia (2.5, F)	Lori (3.7, F)	Alma (3.5, F)	Luis (2.9, M)	Juan (3.0 , M)	Maria 3.2 , F)
Mother (34)	Stepfather (24) Mother (24) Aunt (22)	Father (38) Mother (32)	Father (30's) Mother (28)	Resident male (32) Mother (26)	Father (32) Mother (29)	Father (31) Mother (28)
Mother - part-time nurse	Father - Laborer (part time)	Father - Unemployed	Father - Drapery maker Mother - Cleaning woman (occ.) Avon rep.	Male - Unemployed Mother - Teacher aide	Father - Electrical Assembler	Father - Sheet metal worker
Brother (11) Brother (8.11)		Brother (15.8) Brother (11.7) Brother (4.8)	Brother (11.3) Sister (8.10) Brother (5.11) Brother (4.10)	Sister (5.9)	Brother (7) Brother (5)	Sister (5) Brother (4)
M = 12	M = 12	F = 12 M = 12	F = 12 M = 1	F = 0 M = 12	F = 6 M = 7	F = 7 M = 6
Black	Black	Black	Mexican-American	Mexican-American	Mexican-American	Mexican-American

TABLE #1

U	V	W	X
Terri (3.2, F)	Roberto (3.3, M)	Ronnie (3.0, M)	Miguel (2.5, M)
Mother (20) Grandmother (55) Grandfather (47) Aunt (22) Uncle (12)	Father (35) Mother (45)	Father (28) Mother (24)	Father (32) Mother (32)
Mother - Security guard (mostly unemployed) Grandfather - Construction Laborer (on & off) Aunt - Typist	Father - Heavy equipment operator	Father - Laborer at shipyard (on and off)	Father - Laborer Mother - Avon representative
		Sister (6.3) Brother (2.9) Brother (0.3)	Brother (6.5) Brother (4.7)
M = 11	F = 6 M = 0	F = 12 M = 12	F = 12 M = 10
Mexican-American	Mexican-American	Mexican-American	Mexican-American

above, observations were spread over the hours of the day during which the child was typically awake and over the seven days of the week.

As researchers we assumed the role of observer participant when in the homes collecting data. That is to say, we responded appropriately to conversation directed at us but initiated no interactions during the observations.

There were two foci for the observations. One was the target child (TC). The observer would follow the TC wherever the R went, thus taking notes according to what the TC observed and/or experienced directly. The other focus of the observations was on literacy events, those occasions upon which a person produced, comprehended, or attempted to produce or comprehend written language. Any time the target child or anyone in the TC's immediate environment picked up a book, wrote a note, signed his or her name, scribbled or was in any other way engaged with written language, we characterized the event as fully as possible. We attempted to describe the actions which took place, the context of which the event arose and was played out, the participants in the event, any activities which co-occurred or alternated with the literacy event, the reasons why the event ended, and the activity which occurred subsequent to it. In this way we sought to develop a picture of the child's direct literacy experiences as well as the literacy experiences which she/he had the opportunity to observe.

To give a flavor for the basic data actually used for the analyses performed in this project, we include here some sample events. These events are "cooked" notes (Spradley, 1980) rewritten from raw field notes taken during the observations.

Literacy Event A

Field Notes April 4, 1980 (30 Min.)	M (other) is watching TV, TC is in and out of the room. Dad reads the classified ads of the newspaper, apparently looking for job possibilities. As he reads he occasionally circles an ad. The event ends when Dad puts down the newspaper and goes out to get the mail.

Literacy Event B

Field Notes December 12, 1980 (25 min.)	M (other), TC and baby brother have just arrived at the grocery store. After they go in the two children are placed in the cart, and M does her shopping. M uses her list (constructed just before leaving home) as a reference for selecting certain items. On occasion she glances at particular labels and selects items quickly; at other times she reads labels carefully for a much longer period of time. TC spends much of her time playing with the items in the basket. As the family checks out of the market, M pays for the items with food coupons and signs her name to each of them. The event ends after the check-out operation is completed and the family heads home.

Each of these write-ups represents one literacy event. Note that the duration of the event is also included. In our analyses we used both frequency and duration as quantitative indices of the literacy environments of the homes. The time, or duration of the event, was considered to be from the beginning of the activity which the literacy mediated to the end of the activity. In Event A above we see that the event lasted for 30 minutes and that there was literacy going on for the entire duration of the event.

However, notice Event B above. Her the activity, "shopping," lasts for 25 minutes. There is, of course, literacy mediating this event. That is, nearly all the actions of M are organized around the print on her shopping list or that on package labels. But the reading/writing itself does not last the entire 25 minutes. Nevertheless, we code it as a literacy event lasting 25 minutes because we consider that the activity itself with its associated motives, goals, and operations is the fundamental unit of analysis. Therefore, we have consistently coded time (duration) as the time involved from the beginning to the end of the activity.

Also, one other point about our method of organizing notes for analyses should be made. Our objective was to focus on the contexts of specific literacy events as we wrote up the observations into the "cooked" form which would be used for analyses. On many occasions the contexts of individual literacy events overlapped to such a degree that to separate them and then view them only as separate literacy events would have distorted the sense of the way in which the literacy environment evolved in interaction.

That is to say, often some action embedded within one literacy event A would trigger literacy event B or something which co-occurred with literacy event C would cause literacy event D to begin.

Here is an example of such an extensive/embedded literacy sequence. We present the write-up from field notes and then discuss how we approached the analysis of such sequences.

Field Notes January 28, 1981 (61 Min.)	1:28 S (TC's sister) comes home from her first day back at school after a long absence due to illness. S comes into the kitchen and finds M chatting with

O at the kitchen table. S shows M all of the homework she has to do as a result of her absence from school. S and M discuss the amount of work to be done, the subjects and when it is due back to the teacher. S wants to go out and play but M decides that they will get started on the work "right now." M asks S to decide what she wants to do first (i.e., "what do you want to start with."). As S begins to sort through the material (apparently to decide what she wants to start with). M leaves the kitchen and returns (followed by TC) with two versions of the Bible, Aid to Understanding the Bible, a pen and a tablet. M informs O that since she is going to be helping S, she might as well write a letter to one of her church brothers who lives in Arizona. When M returns to the kitchen S says to M,

1:36 S: Ma, Help me with my spelling words

M: Let me see them.

S: (Hands a spelling list to M)

M: Examines the list of spelling words)

M: Okay, we're going to do these like we always do. You write each word five times and when you finish I'll give you a little test.

1:38 With this statement M hands back the list of words, tears off a page from her tablet and gives it to S and S begins writing the spelling words. TC, who followed M back into the kitchen, has been watching and listening throughout the interactions, now asks M for a sheet of paper and a pencil. M gives TC a sheet of paper and S gives her a pencil. M then starts writing her letter, S begins writing her spelling words ad N starts producing marks on her page.

1:42 M opens her Bible for the first time. M is flipping back and forth through about eight pages. Then she finds what she is looking for and directly copies a passage from the Bible into the letter.

1:44 TC writes for several minutes until her youmger brother comes into the kitchen carrying TC's bat. A struggle for possesion ensues causing M to stop her letter writing activity in order to settle the dispute. Then M goes back to letter writing. As M continues writing the letter she pauses twice more to search for and use quotes from the Bible.

2:03 S tells M that she's ready to take her spelling test. M stops letter writing to recite the spelling list. After reciting each word, M would pause and S would fill the pause by verbally spelling the recited word. While going through the list M varied the order of presentation from the way the list was constructed and the way S had practiced writing them. S spelled each word correctly and M rewarded her with praise. M and S repeated the list three times in succession before M suggested that S do some math.

2:14 After giving S the spelling test M goes back to letter writing for about 15 minutes. The event ends when M stops to chat with O.

Such sequences raised important issues for the concept of literacy event. In some general sense this entire period was an extended literacy interaction. However, we wished to break it down to its component parts, therefore we specified guidelines to determine where one literacy event ended and another began. We saw a literacy event being defined by (a) one of two general literacy actions (reading or writing), (b) a participant structure (literate(s) alone, literates interactive, literate-TC interactive, TC alone, and a few others), (c) the literacy materials involved. When two or more of these facets changed, we considered that a new literacy event had begun.

In the example just presented, we used the criteria stated above to partition the sequence into the following five literacy events:

Event 1: Literates Interactive (10 min.) S (TC's sister) and M (TC's mother) review and discuss homework materials.

Event 2: Literate Alone (25 min.) S studies list of spelling words.

Event 3: TC Alone (6 min.) TC "writes" names on a sheet of paper.

Event 4: Literate Alone (40 min.) M writes letter to a friend and reads the Bible. Event alternates with settling a dispute and giving a spelling test.

Event 5: Literates Interactive (11 min.) M (reads) recites list of spelling words to S. In turn S orally spells the list of words.

The critical events in this sequence are those which involve the homework. First, because the homework itself seems to have set in motion this entire sequence of events. As important, however, is the question of how many events occurred during the interaction between mother and her seven year old daughter. The answer, as we have indicated above, is that there are three different but related literacy events embedded in this extended interaction.

The opening event in the sequence involves mother and daughter reviewing a range of school related materials (spelling exercises, math exercises, phonic exercises and word recognition exercises). Both participants are reading and discussing the material. After several minutes of this activity mother leaves the room, which changes the participant structure. However, for two reasons the event continues; (1) the reviewing (reading) of this same material continues, (2) even though mother leaves the room, her question, "what do you want to start with?" is a continuation of the interaction. This interpretation is supported by S's direct response to the question when M returns to the room (i.e., "Ma, help me with my spelling words"). This event ends when the interaction becomes more focused around a single spelling list. The focus allows M to prescribe definite steps for S and sets up the next event.

Event 2 can be differentiated from event 1 because of a change in participant structure (from literate interactive to literate alone) and a change in the literacy actions (from reading to reading and writing). The isolation of events 3 and 4 from the others should be obvious. Both TC and mother are

working alone (independently) using different sets of material to accomplish different ends.

The difference between event 1 and event 5 is not quite as obvious as the differences between the other four events. The basic question is; how can event 5 be considered as separate from event 1, especially since we see the same material and the same participants in the two events. The answer focuses on the material. Even though the spelling list was involved in both events, it was used differently with different consequences for action in the two events. In event 1 the spelling list began as just another printed sheet among many (functioning in much the same manner as would a single page in a book). When the list was eventually singled out it functioned only to organize the next literacy event for S. In event 5 the list functions as the focus of the event and organizes the entire interaction into an initiation-reply-evaluation sequence (discussed in the next chapter). Moreover, this different function of the material results in different literacy actions being carried out by the participants. This is especially true for S. In event 1 both participants are simultaneously reading and discussing the same material (this is a review session). In event 5 M reads then recites each word on the spelling list while S orally renders the spelling of each word recited by M (a test situation). Thus the difference between the two events results from changes in material and changes in literacy actions.

Although we did pick apart these extended sequences of interaction so that individual literacy events could be tallied and used in the quantitative analyses, we also kept such sequences intact for our qualitative analyses. In this way we attempted to treat the sequences appropriately for different pur-

poses.

These types of write-ups then, represent the data collected from our observations. The presence of an observer in the homes seemed in no way to stifle the reading and writing of the members of the household. On the contrary, in a few families extra literacy events were almost certainly staged for our benefit until the novelty of having an observer around had worn off. Because of this fact and our time sampling technique, we would say that, if anything, the findings reported here may represent a slight overestimate rather than an underestimate of what normally occurs.

Usually during the initial visit to a family, we conducted a Day in the Life Interview. This interview served to give the researcher an idea of the parents' view of a typical day in the family's life and was used both to corroborate what was observed and as an indicator of the times when literacy events would be most likely to occur.

The Study

The activities involving print which we have just presented represent a few exemplars of the influence of culture and society on the development of literacy for one preschool child. Earlier we stated that we believe society exerts a stronger influence than does culture on literacy development in the United States. This is not merely a speculative claim. Rather, it is based on a two year ethnographic study which my colleagues and I conducted in homes where young children live. The research participants in your study were 24 low-income preschoolers and their families. All of the families lived in the metropolitan area of San Diego and equally represented three ethnic groups

(Black American, Mexican American and Anglo). Observations were focused on the preschool children but also included the daily activities of their families when the child was present to observe or participate in them. Observations were conducted for periods of from 3 to 18 months. The numbers of home visits per child raged from 9 to 49, and the number of hours of observations per child ranged from 16.5 to 142, with the total number of hours of observations in the homes of all the children exceeding 2000.

Our basic approach employed observational techniques which were preserved by detailed field notes. By this approach we attempted to describe as fully as possible any and all literacy events which occurred during observation periods. We defined a literacy event as any action sequence , involving one or more persons , in which the production and/or comprehension of print plays a role. Anytime the target child (TC) or anyone in the TC's immediate environment directly used any type of literacy technology (e.g., a book, a pencil, a newspaper, etc.) or was in any other way engaged with written language, the observer characterized the event in their notes, as fully as possible. The focus was on providing a description of the actions which took place, the contexts from which the event arose and was played out, the participants in the event, any activities which co-occurred or alternated with the literacy event, and the activity which occurred after the event ended. In this way we sought to develop a picture of the child's direct involvement in literacy events as well as the literacy events which s/he had the opportunity to observe.

Observations were spread over the hours of the day during which the child was awake and over the seven days of the week. We attempted to interfere as little as possible in the normal activities of the families, and thus assumed the role of passive observer. The presence of an observer in the homes seemed in no way to stifle the reading and writing of the members of the household. On the contrary, in a few families extra literacy events were almost certainly staged for our benefit until the novelty of having an observer around had worn off. Because of this fact and our time sampling technique, we would say that, if anything, the findings reported here may represent a slight overestimate rather than an underestimate of what normally occurs.

Chapter III Results

Overview

As has been discussed in the previous chapter, the target person of our observations was the preschool child. We wanted to know what constitutes his/her experiences with literacy. In particular, we wanted to know whether there were kinds of literacy experiences other than story reading that provide these preschoolers with systematic and useful sources of learning about print. Since the family unit represents the smallest and most familiar social organization which transmits knowledge of literacy it was chosen as the focal setting for our observations. Focus on the family unit was essential because we also wanted to know how the family's everyday use of literacy influenced the target children. We were, therefore, very sensitive to the way in which patterns of literacy related to the total configuration of people's lives. Could we identify outside sources of literate activity (church, governmental documents, school)? Would there be any groupings of activities that might lead us

to identify societal or cultural elements in the organization of literate practice? We were, in effect, attempting to build a broader notion of literacy practice in the home to be used in future quantitative work either as independent variables (to predict school success) or as dependent variables (to measure the effect of some intervention).

During our observations one notable fact emerged and generally characterizes the environment of the children we worked with in this study; literacy is an important part of a wide range of activities which constitute the everyday lives of their families. Literacy seems to be used in functional ways by our families and in ways which link them to society at large. For example we saw parents constructing shopping lists, doing crossword puzzles, filling out welfare forms, reading the newspaper and studying the Bible: Adults were observed reading game rules together; children doing homework alone and in interaction with their parents. We also saw siblings or adults reading stories to younger children and small groups of children reading a comic book together or reading store catalogues.

The wide range of literacy events observed represented a real coding problem for us. Before we could begin analyzing, we had to figure out what we had to analyze. Our field notes were not check sheets. We had no prespecified categories to guide us. Story time might be considered an exception, but it only serves to illustrate the problem we faced. Suppose that we agree that we know what we mean by story time and that it is a reliably scorable unit of activity to be observed in any home. What other categories are there? "Homework" might suggest itself, but we were working with preschoolers. the fact is, there was not an accepted taxonomy of home literacy events that might

involve 2-4 year olds. We had to build a descriptive scheme and using this scheme as a starting point, we could then code each event into its proper category.

The results reported on in this paper represent our solution to the complex problem of building a descriptive scheme. The analytic framework presented below evolved out of a detailed analysis of the over 1400 literacy events we observed during the course of the study. We have attempted to maintain the descriptive focus of our ethnographic methodology and to, at the same time, present a quantitative summary of the major configuration of literate practice within the present sample which could be generalized to similar population of low-income Americans.

The quantitative analysis of data presented below uses ethnicity as the independent variables. One factor, the literacy event, differentiated along five major dimensions served as the dependent variable. Each class of variables is discussed below.

Independent variable

Ethnicity. Our first independent variable was operationally defined as membership in one of the ethnic groups selected to participate in the study. A large body of social science research suggests that the culture of America's various ethnic groups accounts for the variability on a wide range of performance measures of literacy. Indeed, Downing and Thackray (1971) citing several studies, and Heath (1982) have argued that culture plays a very significant role in reading readiness. At the outset of our study we reasoned that any variability in literacy activity resulting from ethnic group membership

may reflect cultural differences in literate practice. It was, therefore, important to organize our analysis in a way that would allow us to investigate this possibility.

Dependent Variable

The original dependent variable employed in the study was the literacy event. However, our observation method and a detailed qualitative analysis of each event allowed us to differentiate the original dependent variable into two quantitative components and three qualitative components. The five dimensions of the literacy event are used throughout the remainder of this report, both to organize the analysis of data and to discuss major configurations of literacy activity in the sample. However, in this section only the quantitative measures will be discussed. The remaining qualitative measures will only be mentioned here, saving the more detailed discussion of them for later sections of the paper.

Both of the quantitative variables employed in data analysis were derived from our method of recording literacy events in the field. The first dependent variable is time and is operationally defined as the duration of the literacy event. This variable is measured in minutes and expressed as a proportion in order to standardize it across all families. This proportion was obtained by dividing the total minutes of literacy events by the total hours of observation. The second dependent variable is frequency and is operationally defined as the number of occurrences of literacy events. This variable is also expressed as a proportion in order to standardize it across all families. This proportion was obtained by dividing the total number of literacy events by the total hours of observation.

The three qualitative variables employed in the analysis were derived from a detailed analysis of each literacy event. These dependent variables are; (1) the participant structure of the literacy event, (2) the "lesson" content of literacy events, and (3) the domain (context) of activity in which the literacy event occurred. All five dimensions of the literacy event will be activities of the families participating in the study. Both dependent variables were examined in isolation and in combination as they resulted from the various levels of both predictor variables.

Basic Data

In this section we present the basic data regarding literacy events and literacy material gathered during the course of the study. As we have discussed in the previous chapter, the research participants in our study were 24 low-income preschoolers and their families. Observations were focused on the preschool children but also included the daily activities of their families when the child was present to observe or participate in them. Observations were conducted for periods of from 3 to 18 months. Examinations of Table 2 reveals that the number of home visits per child ranged from 9 to 47, and the number of hours of observation per child ranged from 14 to 142, with the total number of hours of observations in the homes of all the children approaching

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Insert Table 2 about here

1400. Table 2 reveals that the total number of minutes of literacy observed in each home ranged from 115 to 1351 minutes and the total frequency of literacy events observed in each family ranged from 20 to 97.

TABLE #2

SUMMARY of LITERATE ACTIVITY

ACROSS ALL FAMILIES

		SESSIONS	HRS. OF OBSERV.	TOT. MIN. OF LIT.	OVERALL FREQ. OF EVENTS
Mike	A	30	70	379	59
Bobby	B	28	51	241	33
Barbara	C	29	54	389	55
Kristin	D	9	20	153	23
Alex	E	17	24	115	25
Becki	F	13	39	584	97
Paul	G	34	72	272	77
Holly	H	11	24	417	61
Myeesha	I	47	142	664	75
Natalie	J	33	85	1351	58
Amin	K	33	85	1196	53
Denise	L	30	75	889	73
Harvey	M	20	42	234	20
David	N	19	59	395	38
Alethia	O	5	14	469	44
Sharita	P	21	71	384	23
Alma	Q	36	104	606	67
Luis	R	37	103	477	63
Juan	S	12	35	142	32
Maria	T	10	30	355	24
Terri	U	23	47	283	61
Roberto	V	26	51	370	62
Ronnie	W	24	48	148	47
Miguel	X	23	46	276	77
			1391	10,789	1247

Literacy materials present in the homes were varied. The majority of the homes had few literacy materials, either for adults or for the children. Perhaps the most ubiquitous item was the guide to television programs. In three of the homes no children's books were to be found; in only five homes was there more than a handful of adult reading materials present. Every family had writing materials; however, only five homes were organized so that the target children have ready access to paper and pencil/pen/crayon/etc.

There were seven homes which had, comparatively speaking, significantly greater numbers of literacy materials for both adults and children. Four of these homes were also among the six families for whom literacy played a greater role in everyday activities. [3]

Participant Structure

As we began to examine our field notes we noticed that there was a limited range of participant structures associated with the literacy events we observed. Four general types of participant structures emerged. These are: (1) Literate Alone, (2) Literates in Interaction, (3) Literate - Target Child in Interaction, and (4) Target Child Alone. In this section our objective is to present the pattern of literacy activity we observed organized according to this variable aspect of the literacy event. However, before we present these results, it is important to define the term literate as it was used to mark the various levels of the participant structure.

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3. On at least three of four measures of amount of literacy in the home (frequency of events for adults, amount of time spent in literacy events by adults, frequency of events for TC--both interactive and alone--amount of time spent in literacy events by TC), these six households were quite high. Also, these figures reflect the global judgments of the literacy environments in the homes made by the researchers who worked with the families.

The term literate has been defined in many ways. The definition of conventional literacy offered by Hunter and Harman (1979) accurately specifies the ability level of most of the adults that frequently interact with our target children. They define a literate person as one with "the ability to read, write, and comprehend texts on familiar subjects and to understand whatever signs, labels, instructions and directions are necessary to get along within one's environment." Although this definition is accurate in its description of most of the adults in our sample, its limitations is that it over specifies the ability with print of most of the school age siblings of our target children.

Our alternative was to use a more fundamental definitions of a literate person. In this situation many people might use the term literate in its most fundamental sense: the ability to read and write one's name. However, by this definition many of our target children could be considered literate. Since one of our concerns in the study was an examination of how literate people assist preliterate people to become literate, we required a more rigorous definition of literacy. Our next alternative was to accept that "a person is literate who can with understanding both read and write a short, simple statement on his everyday life." (UNESCO, 1951) This definition successfully excludes our preschool target children from the category of literate people and accurately describes the ability level of most of the school age siblings of our target children. Everyone whose ability with print exceeded this fundamental limit was considered to be literate. All others were considered to be preliterate.

Having defined the limits we placed on the term literate, we are now in a position to present the results of our analysis of the participant structure associated with literacy events. Those events which involved a literate person alone or literate persons in interaction, which the target child observed, are significant. They provided our target children with an opportunity to observe the various ways that literacy enters into, and sometimes connects, the activities of people. A few examples from our field notes will provide the reader with an idea of some of the things our target children saw people doing with literacy. These events will also serve to illustrate the kinds of events we coded into the literate alone and literates interactive categories. These qualitative exemplars will be useful to keep in mind as we proceed through this section to the numerical summaries of the data.

Field Notes January 16, 1981 Literate Alone (10 min.)	M(other) and Sharon are at the kitchen table. Sharon (age 7) is doing homework and mother is writing a letter and alternately assisting Sharon with her homework. Andrew (TC) is in the living room with Terry (brother, age 9) watching TV and playing with toys. Terry who became bored with TV watching, is writing down the names of his ideal all-pro football team. The event ends when Terry finishes his roster of teams and goes outside to play.
Field Notes December 3, 1980 Literate Alone (30 min.)	M(other) is preparing to go to the market, Nancy is in the TV room with all of the kids. Father is in the kitchen paying bills. He is using a tablet where he writes the payee, amount paid and date paid. His procedure is as follows; opens the bill and reads it, writes a check (properly recording it.) Enters the transaction of his tablet, writes paid on the customers copy of the bill, files that in a shoe box with what appears to be other records of payment receipts, stuffs the envelope then repeats the procedure with next bill. Throughout the event Natalie is in and out of the kitchen, sometimes pausing to watch what F is doing, and chat with him. The event ends when father pays the last bill.

Field Notes
July 7, 1981
Literates Interactive
(6 min.)

Martin, Paul (TC), Mother and Grandmother are in living room when observer arrives. Mother and Martin have just arrived home from school. Mother and observer chat while Martin shows his "homework" to Grandmother.

M: I've got homework, lots of homework.

G: Great, that's what I like to see. Oh, that's good. Let me see some more.

Martin and Grandmother continue going over the "homework" (names and various other print in this manner for several minutes. The event ends when grandma has seen all of Martin's work and he takes it to mother to review.

Field Notes
June 1, 1981
Literates Interactive

11:05 Mother and Peg (TC's sister, age 12) are in the living room. Liz (TC's married sister) comes over from next door. She goes into the kitchen and begins to write a list of things she has to do for the day (her list includes a shopping list). Soon mother joins Liz in the kitchen and talks with her about the things on the list.

11:10 Mother's sister-in-law comes over. Now all three talk about list and help to add items as Liz writes.

11:20 Target child goes outside (list making still going on).

These few events provide us with only a glimpse of the various ways that literacy enters into the activities of people with whom our target children live. Nevertheless, they are instructive for they suggest that the various ways might expand a quite diverse range of activity. As these events indicate, the range will include such routine activities as paying the monthly bills and discussing school work and extend to such creative and entertaining activities as a 9 year old boy building a football superpower. However, for our purposes, of even greater interest are those events in which the partici-

pant structure is the preliterate target child interacting with a literate person, especially with a parent but also with an older (literate) sibling. Such events are of particular significance because it is in these social interactions that we can observe (1) the structure of the activity, (2) the effectiveness of the literate person in negotiating the preliterate child's zone of proximal development and (3) the manner that beginning literates use print to mediate their interactions with others. Again, a couple of examples from our field notes will serve to illustrate the type of events we coded into the literate-target child interactive category. The events included here primarily illustrate points 1 and 3 but the last example also illustrates an unsuccessful attempt of an older sibling to construct and negotiate the child's zone of proximal development.

Field Notes
April 15, 1981
Literate - TC Interactive (2 min.)

After TC and Tina watch Romper Room, Tina begins to color and TC gets a new card game to show O. TC hands O the box (Strawberry Shortcake card game). TC tells O they are Strawberry Shortcake cards.

TC: Let's play.

O: How do you play?

TC: (Handling O the Directions card)
You read the directions.
O reads the directions aloud. (2 min.)

TC: You have to let me win.
(TC and O play cards.)

Field Notes
January 5, 1981
Literate - TC Interactive (2 min.)

Paul (TC) is called into the kitchen to eat breakfast. While in the kitchen he shows O a wall calendar. He says, "McDonalds, hamburguesas" as he points to Burger King. He turns the pages and points to a food coupon on each saying "you buy one--you get another one too." After about 2 minutes M announces that everything is served and must be eaten while

hot.

Field Notes May 11, 1981 Literate - TC Inter- Literate - TC Inter- active (30 sec.)	Walking in the park Tasia spots a stake-like metal object with print on it. She asks M what it is. M tells her she told her last time, then M reads, "City of San Diego - Survey Monument." They continue walking through the park.

Field Notes September 30, 1981 Literate - TC Inter- active (30 sec.)	Tasia has been picking things up in preparation for watching Sesame Street. She finishes ahead of time and begins to color. She opens her color book upside down. She recognizes one picture (book still upside down), says "ice cream man." Mike (12 yr. old) asks TC what S-O-D-A spells (also printed in picture.) TC says she doesn't know. Mike gives her a clue--its something you drink." TC is not interested. She asks for marking pens so that she may color the picture.

The final category of participant structure is target child alone. The reading and writing and attempts at reading and writing which our preschool children perform provide information about their developing conceptions of and skills in literacy. The literacy events in which the TC engaged independently ranged from the pretend reading of books and labels to the invented spelling of the names of family members and the construction of pretend shopping lists. Examples from our field notes will provide some idea of the activities with print material which our young preschoolers carry out.

Field Notes April 4, 1980 TC Alone (2 min.) Reading	M and O are chatting. TC is watching TV. During a commercial TC decides to brush her teeth. M gets and gives TC the tub of toothpaste. After M hands TC the toothpaste, TC looks at it and says, "That's aim." (it was) TC continues to recite a portion of the TC commercial about "no tooth decay" as she points to the word fluoride on the tube.

Field Notes
December 12, 1980
TC Alone
Writing

M, TC and Player have just finished grocery shopping. While riding home in the car, TC searches for and finds a pen in the glove compartment and a piece of paper on the floor ad begins writing. She continues for approximately eight minutes. Upon arriving at home, TC shows the paper to O and says, "See my list." Once the family is back in the house TC continues working on her list for another two minutes. This literacy event ends when Marie apparently finishes her list and goes to help her mother put away the groceries.

Field Notes
January 16, 1980
TC Alone
Reading (TV Guide)

M is watching TV soap operas when TC, who is sitting on the sofa next to O announces to no one in particular, "I gonna watch something else." With this statement she walks over to the TV and picks up the TV Guide one page at a time. After turning past the articles in the magazine she says, "Momma, what day this is?" Mother replies that it is Friday. The child then turns five more pages before she focuses her gaze on a single page. When she stops turning pages, she begins to vocalize, again to no one in particular. She says, "I gonna watch Popeye" as she points to print in one ? of the page. This naming included two other programs. Then she announces, "No, I gonna watch Wonder Woman at 3:00." When Marie says this she is actually pointing to the 6:00 listings; specifically, she points to CBS NEWS for Wednesday. After she makes her "decision," she gets up from her seat, goes over to the TV and quickly pretends to turn the channel. Then she puts the Guide back on top of the TV and sits back down with her arms folded across her chest which ends the event.

Insert Table 3 about here

Insert Table 4 about here

Quantitative Summary. Table 3 and Table 4 summarize, for each of the households, the average frequency of literacy events and amount of time spent in activities involving reading or writing, according to the participant

TABLE #3

FREQUENCY

Family	Literates Alone	Literates Interactive	Lit-TC Interactive: Lit Initiated	Lit-TC Interactive: TC Initiated	Literate/Non-Literate TC Interactive	TC Non-Literate Interactive	TC Alone	Interactive Events Involving Non-Literates (TC Observing)	Non-Literate Alone	Average Total Frequency/hour
A = Mike	.24	.08	.17	.07	-	-	.42	.03	.04	.85
B = Bobby	.16	.20	.06	.02	-	-	.22	-	-	.66
C = Barbara	.25	.30	.04	-	-	-	.37	-	.07	1.03
D = Kristin	.45	.30	.20	.05	-	-	.15	-	-	1.15
E = Alex	.27	.15	.06	.03	-	-	.26	-	-	.77
F = Becki	1.02	.63	.42	.21	.04	-	.81	.25	.68	4.06
G = Paul	.17	.23	.21	.05	-	-	1.00	.06	.18	1.92
H = Billy	.28	.12	.16	.57	-	.08	.98	.04	.25	2.48
I = Priscilla	.11	.03	.04	.03	-	-	.33	-	-	.54
J = Natalie	.31	.11	.08	.02	-	-	.17	-	-	.69
K = Alan	.32	.13	.03	-	-	-	.10	-	-	.60
L = Denise	.40	.04	.19	.04	-	-	.31	-	-	.98
M = Harvey	.38	.02	-	-	-	-	.07	-	-	.47
N = David	.22	.21	.11	.02	-	-	.15	-	-	.71
O = Alethea	.22	.28	.37	.37	-	-	1.63	.21	.15	3.23
P = Sharita	.15	-	.05	-	-	-	.13	.01	-	.34
Q = Alma	.17	.09	.12	.06	.01	-	.15	.02	.02	.64
R = Luis	.08	.04	.05	.07	-	.04	.24	.02	.02	.98
S = Juan	.30	.24	.09	.09	-	-	.14	.03	-	.89
T = Maria	.13	.07	.06	-	-	-	.20	.26	.07	.79
U = Terri	.23	.06	.42	.19	-	-	.30	.02	.02	1.24
V = Roberto	.13	.16	.26	.14	.02	.02	.39	.06	-	1.18
W = Ronnie	.18	.02	.08	.27	.02	.02	.23	.10	.11	1.03
X = Miguel	.17	.16	.34	.16	.02	.07	.48	.15	.11	1.66

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TABLE #4

TIME

Family	Literates Alone	Literates Interactive	Lit-TC Interactive: Lit Initiated	Lit-TC Interactive: TC Initiated	Literate-Non-Literate TC Interactive	TC Non-Literate Interactive	TC Alone	Interactive Events Involving Non-Literates (TC Observing)	Non-Literate Alone	Total Time (Proportions)
A = Mike	1.07	.36	1.23	.46	-	-	1.31	.49	.50	5.42
B = Bobby	.70	2.63	.28	.22	-	-	.92	-	-	4.75
C = Barbara	1.43	3.58	.73	-	-	-	1.64	-	.85	8.23
D = Kristin	3.62	.73	3.00	.05	-	-	.26	-	-	7.72
E = Alex	1.12	1.14	.17	.01	-	-	1.00	-	-	3.56
F = Becki	13.13	1.51	2.14	1.23	.11	-	4.53	1.13	2.51	26.29
G = Paul	.55	.92	1.01	.24	-	-	2.17	1.10	.54	6.53
H = Holly	.92	.75	4.62	1.02	-	1.11	7.97	-	.61	17.00
I = Rhonda	2.41	.52	.20	.13	-	-	1.42	-	-	4.68
J = Natalie	6.54	6.79	1.17	.23	-	-	1.17	-	-	15.90
K = Anna	5.70	7.03	.91	-	-	-	.44	-	-	14.08
L = Denise	5.71	2.43	2.18	.24	-	-	1.29	-	-	11.85
M = Harvey	4.64	.38	-	-	-	-	.76	-	-	5.78
N = David	2.43	2.80	.57	.25	-	-	.63	-	-	6.68
O = Alethia	5.63	2.14	4.89	4.89		-	12.00	4.80	.37	34.72
P = Sharita	3.71	-	.38	-	-	-	.89	-	-	4.98
Q = Alma	1.41	.68	1.63	.24	-	-	1.39	.24	.03	5.62
R = Luis	1.42	.23	.17	.32	-	.12	1.57	.69	.22	4.74
S = Juan	.92	.81	.68	.39	-	.43	84	.03	-	4.10
T = Maria	1.05	8.14	.14	-	-	-	.80	1.67	.27	12.07
U = Terri	1.13	.85	1.20	1.83	-	-	.90	.11	.04	6.06
V = Roberto	.82	.20	3.14	.71	.25	.02	1.34	.53	-	7.21
W = Ronnie	.79	.04	.71	.37	.04	.02	.27	.44	.21	3.09
X = Miguel	1.23	.61	.85	.46	.04	.09	.35	1.09	1.32	6.04

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structures of the events. First, it should be noted that all of the target children had opportunities to observe the reading and writing of other persons around them and that they all participated in literacy events. It should also be noted, however, that there was considerable range in the frequency and time measures of the literacy event in the families.

The adults engaged in a median number of .45 literacy events per hour (or approximately 6 per day) which the target children had the opportunity to observe and spent a median of 3.62 minutes per hour (or approximately 51 minutes per day) in such activities. Relative to the participant structures of Literate(s)-TC Interactive and TC Alone, the frequency and time of adult events were more homogeneous across families. The range in the amount of interactive literacy events between the TC's and literates [parents or older siblings] in the families was especially striking. Three of the children experienced on the average of only 1 such event every 50 hours (or almost one every 3-4 days), and for a total of 10 of the target children there is an average of 1 or fewer interactive literacy events per day. On the other hand, 6 of the children averaged more than 7 interactive events with adults each day. Overall for the 24 target children the median frequency (1.13 events/hour) and median (1.25 minutes/hour) of interactive literacy events were lower than the medians for either the participant structure of Literates Alone or in Interaction or that of TC Alone.

The TC Alone category, as was the case with Literate(s)-TC Interactive also exhibited considerable variation across the 24 target children for frequency of and time spent in activities involving reading or writing. Nine of the children initiated, on the average, fewer then 3 individual literacy

events per day while 4 TC's engaged in reading and/or writing-like activities by themselves on the average of more than 16 times per day. Overall, the target children tended to be involved in more literacy where they were the only participants than in interactive literacy events with adults or older siblings.

The quantitative results presented above examine participant structure as it occurred in each of the participating families. Our final quantitative summary of the participant structure variable examines it as it resulted from variation on the two primary predictor variables. A close examination of

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Insert Table 5 about here

Insert Table 6 about here

Insert Table 7 about here

Table 5, Table 6, and Table 7 demonstrates that within the participating families literacy events more frequently occurred when literates were acting alone than when they were in interaction with other literates or when they were interacting with the target child (mean frequencies = .31, .16 and .25 respectively; p =). Within this overall pattern Anglos tended to more frequently engage in literacy events in both the Literate Alone condition (mean frequency = .49) and the Literates Interactive condition (mean frequency = (.26) than did Chicanos (mean frequency, Literate Alone = .19) and Chicanos and Blacks (mean frequencies, Literates Interact = .11 and .10, respectively; p =

Table 5

Table 5: Mean Number of Literacy Events per Hour of Observation

	Literates-TC Inter-Act (Adult & TC Init. combined)		Literates Interact		Literates Alone	
	Mean	SD	Mean	SD	Mean	SD
Overall	.25		.16	.14	.31	.28
Anglo	.29		.26	.19	.49	.42
Black	.17		.10	.10	.26	.10
Chicano	.30		.11	.06	.19	.08

Table 6

Mean Minutes of Literacy Events per Hour of Observation

	Literates-TC Inter-Act (Adult & TC Init. combined)		Literates Interact		Literates Alone	
	Mean	SD	Mean	SD	Mean	SD
Overall	1.91		2.57	2.84	3.25	3.50
Anglo	2.05		2.56	2.34	3.12	4.53
Black	2.01		2.76	2.76	5.34	3.20
Chicano	1.67		2.39	3.65	1.28	.38

Table 7

Mean Number of Literacy Events per Hour of Observation

	Literates-TC Inter-Act (Adult & TC Init. combined)		Literates Interact		Literates Alone	
	Mean	SD	Mean	SD	Mean	SD
Overall	.25		.16	.14	.31	.28
Male	.22		.13	.06	.30	.31
Female	.31		.18	.19	.32	.26

Table 8

Mean Minutes of Literacy Events per Hour of Observation
for the combined Factors of Participant Structure and Sex of TC

	Literates-TC Inter-Act (Adult & TC Init. combined)		Literates Interact		Literates Alone	
	Mean	SD	Mean	SD	Mean	SD
Overall	1.91		2.57	2.84	3.25	3.50
Male	1.13		1.48	1.97	1.85	1.65
Female	2.69		3.66	3.22	4.64	4.32

(Literates Alone) = .0678, Duncan > .075; p (Literates Interact) = .0330, Duncan > .05).

In regards to time, a different pattern of finding emerges. The most literacy still occurs in the Literate Alone condition (mean time = 3.25) as compared with the Literates Interact (mean time = 2.57) and Literates-TC-Interact condition (mean time = 1.91). However, with this pattern, Blacks tended to spend more time doing literacy alone (mean time = 5.34) than did Chicanos (mean time = 1.28; p = .0604, Duncan > .05). Anglós were undistinguishable from either group in amount of time spent doing literacy alone (mean

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Insert Table 7 about here

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time = 3.12). Table 8,

No significant differences in the frequency of literacy events in the three participant structures occurred with respect to sex. (See Table 3).

With respect to time, females tended to spend more time in all three conditions (Literates-TC Interact, mean time = 2.69; Literates Interact, mean time = 3.66 and Literates Alone, mean time = 4.64) than did males (mean times = 1.13, 1.48, and 1.85; p = ___, .0585, and

With one exception, no significant differences in time or frequency were found among the three participant structures in regard to the remaining demographic variables (level of education, family size, and presence or absence of siblings). This one exception was in the Literates Interact condition. Small families tended to spend less time, literates in small families tended to spend less time in interactions with each other involving literacy than did

medium and large sized families (mean times = .99, 3.47, and 3.56 respectively, p = .1047).

Lesson Content

In the previous section we presented the four participant structures associated with the literacy events we observed. Of these four structures we were particularly interested in the configuration of participants which involved literates interactively and a literate person and the target child in interaction. These participant structures provided us the opportunity to examine in general literacy lessons as they occur in the home and in particular those which involve the target child as a direct participant. We have defined literacy lessons as interactions which are organized specifically to communicate some type of information (e.g., techniques, skills, values, etc.) about literate practice. Often, a particular discourse structure is employed to accomplish the lesson.

The "initiation-reply-evaluation" (IRE) sequence has often been described as the critical component of classroom lessons (e.g., Sinclair and Coulthard, 1975; Griffin and Humphrey, 1978; Mehan, 1979). When this discourse structure occurs at home in association with reading and/or writing it is considered to be excellent preparation for later success in school. According to Heath (1982) it is a structure that is primarily constructed around books and most frequently carried out by "mainstream" families. We were interested in examining the extent to which this type of literacy event occurs in low-income homes. We discovered that IRE lessons do occur in low-income families. However, all literacy lessons that occur at home do not necessarily use an IRE discourse structure.

We have differentiated the literacy events we observed into two categories of lessons; IRE and Non IRE. Each category of event is briefly discussed below accompanied by appropriate examples.

IRE Lessons. This category of events captured interactions between participants which centered upon literacy in a manner which replicated or generally modeled the discourse structure and content of lessons as they typically occur in school classrooms. However, there are a few differences between IRE lessons as they occurred at home as compared to how they might be expected to occur in the school setting.

In-school lessons typically are composed of multiple or extended (in time) IRE sequences. The IRE lessons we observed in the homes were marked by variability. They ranged from comparatively brief encounters, consisting only of a single IRE sequence and lasting less than a minute to those which lasted for an hour or more and were composed of multiple IRE sequences. These lessons most often involved the mother interacting with the target child, although occasionally there were instances in which older siblings or other literate people interacted with the target child in an IRE lesson event.

This leads to a second point about IRE lessons. Literacy instruction in school is guided by an overall curriculum, some general or specific set of instructional practices that are intended to help students progress in reading and writing. Although we describe IRE lessons in the home as being organized specifically to communicate some type of information about reading and writing, this should not be taken to imply that the literate people in our target children's environments have worked out a coordinated scheme for instructing

the childre in reading and writing. On the contrary, in only one home did we find a mother who had devised some generalized plan for instructing her child in literacy.

Finally, it should be mentioned that the lessons involved both reading and writing, but most often the unit of language focused upon was something less than a textual one. That is to say, letters or words (especially personal names) were more often the object of the IRE lesson than were stories or other types of text. A few examples from field notes will serve to illustrate the points we have made above.

Field Notes
October 3, 1980
Literate - TC
Interactive

Larry was in his room playing alone when his mother brings the target child a poster for them to put up.

Mother: "Where do you want it?"
(As she unrolls the poster.)

TC: "Right there."

Mother: "What does it say?" (As mother finishes pinning poster to wall)

TC: "Kermit the frog."

Mother: "No there's no (meaning "no word") frog up there. Where's the 'F'?"

TC: "I don't know."

Mother: "It just says (Mother runs finger under print on poster) Kermit."

TC: "Kermit, that's Kermit." (As he points to poster)

Mother: "Yea."

Field Notes
February 17, 1981
Literate - TC
Interactive

Dad is babysitting with D and has just finished reading the "Three Bears" to D (non-interactively). When they are finished Dad selects an ABC book from a stack of two sitting on the sofa to their left. He opened the book and the following occurred:

D: What's that? (pointing to the letter A)

De: I don't know.

D: A is for Apple.

De: I a A (generally pointing to the A)

D: That's right, now what's that (pointing to B)

De: I don't know.

D: B, is for baboon.

De: Oh

D: What letter is this (points to B)

De: It's a secret.

D: It's a B

De: B!

D: Ah (makes the sound of A, apparently as a hint)

De: S

D: A

De: A!

D: Now, what letter is this (points to A)

De: A!

D: Right on, give me 5 (extending his hand). Now, what's that? (points to B)

Dad closes the book and turns on the TV.
D continues looking at book for about 3 minutes. Then she gets on the floor with her perfection game and begins playing with it.

Field Notes
June 23, 1980
Literate - TC Interactive (68 min.)

5:25 The TV show mother and TC have been watching is just about to go off when Mother decides that now might be a good time to "have school." M sets up the Magic Erasable Writing Board (plastic card board approximately 12 x 18, with faint green lines printed across it) which M had bought for TC.

TC begins trying to write a Z, gets frustrated. M writes a Z, says:

M: There's a Z.

TC: Z.

TC makes A.

M: That's a nice A. You could make them smaller so they fit in the lines.

TC then makes L's.

M: Oh, you're L. (TC begins making more lines on L's) Oh, what are you turning it into?

Ends up with ____

M: You got carried away. E's only have a line in the middle. An F has two lines. An E has three lines. Yours has (counting 1-7) 7 - too many.

TC makes an E.

M: That's right.

5:30 M talks to O about her job. TC continues writing on master paper (diagram of letters with directional arrows to aid in letter formation) with

alphabet diagram.

5:37 TC and M put Magic Writing Board away. TC washes hands.

5:39 Return to table.

M: Do you want to do words or puzzles?

TC: Puzzles.

M hands TC bunch of animal puzzle pieces. It has names of animals written over the animals. M helps her match the pieces.

M: What's this one say?

TC: Lion

M: And this one?

TC: Baby one.

M: Lion cub. That's what they call a baby cub.

After puzzle together M 'quizzes' TC:

M: Where does it say elephant?

TC points to correct word, says it, following word with her tiger (etc. for monkey, giraffe, camel, lion, lion cub).

5:46 M brings out bunch of larger and smaller cards.

Task is to march words (Mouse, pig, apple, zoo, et al.).

5:58 M brings out small paperback book from the learning skills kit. Roger and the Elephant. M has TC look at different pages and describe what is happening. Go through whole book, page by page.

6:00 M brings out Magic Board. TC writes on it alone for 5 minutes.

6:12 TC opens Sesame Street magazine to page where there is letter matching exercise. M tries to get her to do this and other activities in the book. M reads certain portions to TC. At some point M will

read question and TC will circle answer. Or TC will put X on the word _____. Also pages with shapes.

6:21 M tears printed ad insert out of Sesame Street Magazine, goes to TC, and puts away magazines TC writes on insert. TC continues writing on paper, Magic Board 10 minutes alone while M, F, O talk.

Event ends at 6:35 when all go into living room.

Non IRE Lessons. In contrast to IRE lessons, non IRE lessons center more around the functional use of print than the techniques and skills involved in the production of print (e.g., print can be used to label things or to aid in finding things, etc.). Non IRE lessons may also present the child value statements regarding literacy (e.g., "writing is better than playing") or alert the child to the fact that literacy is an operation that is distinguishable from other operations than can be performed with the same utensils (e.g., "I want you to write not draw"). Again, a couple of examples from field notes will serve to illustrate non IRE lessons.

Field Notes
March 6, 1980
Literate - TC Interactive

12:12 TC has been plodding around house for a few minutes. She doesn't want to stay inside but must because it is raining.

M: Let me see if I can think of something fun for you to do. Would you like to color with some paper and markers?

TC: Yeah!

Interactive play with paper and markers takes place. Characterized a lot by IRE sequences, with mother asking "What color is that?" as TC marks on paper. Also discussion of TC's 'drawings.'

12:20 M: Do you want me to write your name?

TC: Yes

M: You do it

TC: By myself?

M: Do you know how?

TC: No

M takes marker. Says each letter as she writes it. (as M writes TC's attention diverted elsewhere)

M: See, there's your name.

TC: Oh. (not showing much enthusiasm)

Then TC and M interactively draw more pictures. TC requests that M make a boy. M draws one body part at a time, annoumcing which it is and when finished with drawing says:

M: Now we'll make a boy.
(and writes BOY over top of drawing)

Same with Mama. (TC now participates in labeling of body parts). Repeat with Erin. And Dad.

From time to time M tries to opt out of this activity but TC keeps drawing her back in, making her write/draw for TC. M wants TC to write/draw for herself.

At end of activity M puts TC's name on paper "so everybody will know who did it."

Field Notes
March 11, 1981
Literate - TC Interactive

Mom has just served D her breakfast of eggs and grits. She is now looking for something in cabinets above the sink.

M: I can't find the Ovaltine.

D: (Who is now focusing on mom)
There it is.

M: Where? (she says this as she picks Delores up to take her over to the cabinet) Show me.

D: (Goes right to it and picks it off the shelf)

M: Hey, that's good! I didn't know you could read.

D: smiles

Insert Table 9 about here

Insert Table 10 about here

Quantitative Summary. Table 9 and Table 10 summarize, for each of the households, the average amount of time spent in and frequency of literacy events according to the lesson content of events. First, it should be noted that once again there was considerable variation between families in the time/frequency of literacy lessons. Three target children had neither the opportunity to observe or participate in a literacy lesson during the entire course of observations. An additional two target children had no experience, during observations with IRE lessons and an additional seven target children had no observable experience with non IRE lessons. On the other hand, four target children experienced comparatively extensive exposure to literacy lessons.

The quantitative results presented above examines the lesson content of literacy events as an outcome in each participating family. Our final quantitative summary of the lessons variable examines it as it resulted from variation on the two primary predictor variables. A close examination of Tables 12 through 15 reveals that overall, the highest frequency of literacy events

TABLE #9
Lesson Content of Literacy Events
Frequency

Family	Non-Lesson	Lesson	
		IRE	Non-IRE
A = Mike	.74	.11	-
B = Bobby	.66	-	-
C = Barbara	1.03	-	-
D = Kristin	1.00	-	.15
E = Alex	.68	.06	.03
F = Becki	3.77	.12	.17
G = Paul	1.67	.05	.20
H = Holly	2.12	.20	.16
I = Myeesha	.52	.02	-
J = Natalie	.64	.03	.02
K = Amin	.56	.01	.03
L = Denise	.76	.11	.11
M = Harvey	.47	-	-
N = David	.51	.20	-
O = Alethia	3.16	.07	-
P = Sharita	.32	.02	-
Q = Alma	.59	.03	.02
R = Luis	.51	.03	.02
S = Juan	.83	.03	.09
T = Maria	.59	.13	.07
U = Terri	1.14	.06	.04
V = Roberto	.92	.08	.18
W = Ronnie	1.01	-	.02
X = Miguel	1.38	.15	.13

TABLE #10
Lesson Content of Literacy Events
Time

Family	Non-Lesson	Lesson	
		IRE	Non-IRE
A = Mike	4.45	.97	-
B = Bobby	4.75	-	-
C = Barbara	8.23	-	-
D = Kristin	7.48	-	.24
E = Alex	2.90	.40	.06
F = Becki	25.63	.24	.51
G = Paul	5.41	.31	.81
H = Holly	12.22	4.60	.18
I = Myeesha	4.53	.15	-
J = Natalie	14.58	.49	.83
K = Amin	12.70	.47	.91
L = Denise	10.96	.70	.19
M = Harvey	5.78	-	-
N = David	3.83	2.85	-
O = Alethia	33.24	1.48	-
P = Sharita	4.77	.63	-
Q = Alma	4.87	.82	.13
R = Luis	4.52	.12	.10
S = Juan	3.57	.09	.44
T = Maria	10.94	.58	.51
U = Terri	4.99	.97	.10
V = Roberto	4.33	1.41	1.47
W = Ronnie	3.03	-	.06
X = Miguel	4.09	1.15	.80

occurred in the non lessons category (mean frequency = .49) as compared with lessons (IRE and non IRE combined, mean frequency = .13). As can be seen from

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Insert Table 11 about here

Table 11 no significant differences in the frequency of IRE Lessons, NonIRE Lessons, or Nonlessons obtained among ethnic groups in the sample.

In regards to time, the same pattern obtains, the most literacy still occurs in the Nonlesson category (mean time = 5.93) but the differences in amount of time between Nonlessons and IRE Lessons (mean time = .58), NonIRE Lesson (mean time = .65) or lessons (IRE and NonIRE combined mean time = 1.24) are not significant. Further, no significant difference in the amount of time spent in IRE Lessons, NonIRE Lessons, or Nonlessons obtained among ethnic

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Insert Table 12 about here

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groups in the sample (see Table 12).

No significant differences in the frequency of literacy events in regards to IRE or NonIRE Lessons or Nonlessons occurred with respect to sex (see Table

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Insert Table 13 about here

Insert Table 14 about here

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13 and Table 14).

Table 11

Mean Number of Literacy Events per Hour of Observation
for the Combined Factors of Lesson Content and Ethnicity

	IRE Lessons		NonIRE Lessons		Non Lessons	
	Mean	SD	Mean	SD	Mean	SD
Overall	.04	.05	.09	.20	.49	.37
Anglo	.04	.04	.19	.33	.68	.55
Black	.05	.06	.02	.03	.40	.20
Chicano	.03	.03	.06	.06	.38	.20

Table 12

Mean Minutes of Literacy per Hour of Observation
for the Combined Factors of Lesson Content and Ethnicity

	IRE Lessons		NonIRE Lessons		Non Lessons	
	Mean	SD	Mean	SD	Mean	SD
Overall	.59	1.04	.65	1.50	5.93	5.30
Anglo	.70	1.56	.32	.44	6.31	7.30
Black	.75	.87	1.23	2.54	7.41	4.26
Chicano	.32	.50	.39	.48	4.07	3.76

Table 13

Mean Number of Literacy Events per Hour of Observation
for the Combined Factors of Lesson Content and Sex of TC

	IRE Lessons		NonIRE Lessons		Non Lessons	
	Mean	SD	Mean	SD	Mean	SD
Overall	.04	.05	.09	.20	.49	.37
Male	.04	.05	.14	.28	.38	.11
Female	.04	.04	.05	.05	.60	.50

Table 14

Mean Minutes of Literacy per Hour of Observation
for the Combined Factors of Lesson Content and Sex of TC

	IRE Lessons		NonIRE Lessons		Non Lessons	
	Mean	SD	Mean	SD	Mean	SD
Overall	.59	1.04	.65	1.50	5.93	5.30
Male	.48	.77	.35	.45	3.33	3.10
Female	.69	1.29	.95	2.08	8.53	5.86

With respect to time, however, families with female TCs spent more time in nonlesson literacy events (mean time = 8.53) than did families with male TCs (mean time = 3.33) ($p = .0125$).

Domains of Literacy Activity

Up to this point our presentation of results has presented the literacy event as an isolated unit. However, our data clearly indicates that in reality the literate environment of the child is not a sequence of random events. The literacy event functions not as an isolated event of human activity, but as a connected unit embedded in a functional system of activity generally involving prior, co-occurring and subsequent units of action. In other words, the literacy events we observed occurred within particular contexts, i.e., within particular socially assembled situations. Through a careful analysis of the several literacy contexts we described in our field notes we were able to identify several elements of these complex literacy situations. The particular elements of the literacy context that we have identified are the materials, the people (and their participant structure) their goals, behavioral rules and expectations, the physical setting, as well as prior and subsequent units of action. Based on this qualitative analysis of the context surrounding the literacy event we were able to construct an analytic system of domains of literacy activity.

Once we began the detailed qualitative analysis of our field descriptions of the literacy events we observed, we noticed that the type of literacy technology being used ad the actions constructed around them were implicated in the events in non trivial ways. First, the material could be linked to other organizations and institutions outside of the home. That is, the originating

point of the material involved in most literacy events could be traced directly back to particular segments of this society, e.g. the trade economy, the school, the church, the welfare system, etc. Second, particular material was associated with a particular sequence of actions. For example, TV or movie listings were used exclusively in an instrumental way to select entertainment, the Bible was used exclusively to learn or teach "the word of God," a shopping list was used exclusively for shopping, etc. The limited range of actions associated with the particular literacy material could be described and defined only by a limited range of labels and meanings provided by the society. That is, literacy contexts are constituted of actions that cluster around or can only be described in terms of definitional labels provided by society, e.g. shopping, getting welfare, playing games, doing homework, etc. Moreover, these actions fit into networks of activity that are organized by the society.

For the purpose of constructing an analytic category system of domains of literacy activity we focused our examination of the literacy event on the observable behavior that was organized around literacy materials. We were then able to identify the salient dimensions of the literacy context as the material, the actions of people and the societal definitions typically assigned by society to those actions. Based on a consideration of these dimensions of the literacy context we were able to organize our literacy events into nine domains of literacy activity. The nine domains have been labeled as Daily Living, Entertainment, School Related, Religion, General Information, Work, Literacy Techniques and Skills, Interpersonal Communication and Storybook Time. These domains and their societal linkages are presented below.

(1) Daily Living Routines. Literacy events coded into this domain were embedded in activities which constitute the recurrent practices of ordinary life for the families in our sample: obtaining food, maintaining shelter, participating in what is required by social institutions, maintaining the social organization of the family. Literacy events appeared in daily living activities such as shopping, washing clothes, paying bills, getting welfare assistance, preparing food, getting the children dressed, etc. Examples of this type of event were presented earlier in the section on participant structure. An additional example is presented below;

Field Notes
December 12, 1980
Literates Alone
(10 min.)
Daily Living

M has just finished preparing breakfast and is talking to F, who is trying to concentrate on a boxing match being shown on TV. TC is at the kitchen table eating breakfast. After M finishes her conversation with F about going to the grocery story M enters her kitchen, selects a cookbook from on top of the refrigerator and takes the book to the kitchen table where TC is sitting eating breakfast. M sits directly across the table from TC. TC directs her attention to M when she sits down. M first consults the table of contents in the book and then turns to a particular recipe and reads it for approximately three minutes. TC watches closely what her mother is doing during this time but does not verbally or physically interact with her. After the three minute period M closes the book, get a small tablet and pencil and returns to sit at the table. TC then asks, "What 'cha doing', Ma?" M's response was partially inaudible but she ends by saying, ..and I got to make my list." Still sitting directly across from TC, M begins to construct her shopping list. In constructing the list, M writes the names of several items she needs. Then she proceeds to alternate between getting up to check the refrigerator or the cupboard and writing additional items on the list. These actions last for a total of six minutes. Again TC attends closely to what her mother is doing. The event ends when M finishes her list and leaves the table to get Player dressed to go to the store.

(2) Entertainment. Literacy events coded into this domain were embedded in activities that passed the time of the participant(s) in an enjoyable, constructive or interesting manner. Literacy was observed to occur in a wide variety of activities in this domain. However, depending on the activity, literacy itself may be (1) the source of the entertainment (reading a novel or doing a crossword puzzle), (2) instrumental to engaging in the entertainment itself (reading the TV guide to finding out what programs will be on, reading the rules for parlor games), or (3) a facet of media entertainment (reading which occurs in the course of a television program or film). Examples of each type of entertainment event are presented below.

Field Notes
February 19, 1980
Literates Alone
(10 min.)
Entertainment - Print as Source

2:19 M has just finished cleaning up from lunch. She She comes into the living room where TC is playing. M picks up her novel, sits down to read. Ends when next event begins/mailman arrives.

Field Notes
June 12, 1981
Literate/TC Interactive
(2 min.)
Entertainment - Print as Source

3:13 Mother is in kitchen cleaning and arranging things in there. After the children had shown me some Bible stories they liked, Javier looks for something to do and gets out a book about a dog. Geraldo goes into the kitchen with mother.

Javier goes across the room to sit on the sofa telling me that the book he had was his favorite book. TC goes and sits by Javier as Javier begins to read.

As Javier reads his book he holds it right in front of him rather than accommodating himself to Raul at his side. Raul is forced to move his shoulder in an awkward position.

TC makes a few comments about the picture. Javier tells him, "Yes, but listen." TC falls in closer into Javier's lap but Javier nudges him up. After two minutes TC tires of this and gets off the sofa. He goes off into the one bedroom of the house. This room is where the toys are kept and TC soon returned to the living room with a wooden puzzle.

Field Notes February 14, 1980 Literates Alone (2 min.) Entertainment - Print as Instrument	M is in living room watching TV. TC is playing with toys on floor. M looks at TV Guide, then changes channel to Dionne Warwick special.
Field Notes March 6, 1980 Literates Alone (5 min.) Entertainment - Print as Instrument	M, F and TC have just arrived back from F's father's. They carry in some things and get settled. F sets in chair in living room and immediately begins reading directions for playing backgammon. (M in kitchen getting lunch ready) TC in living room playing with toys.
Field Notes September 25, 1981 Literates Alone (30 sec.) Entertainment - Media	The children were all watching TV. Mother was in the room with the children. A "Kool Aid" commercial came on the tube. As the words "Kool Aid" flashed onto the screen TC and her two brothers yelled out the product name.
Field Notes June 30, 1980 Literates Interactive Entertainment - Media	8:15 TC and cousin (9 year old - J) have just just finished having bath. They come to living room where F is watching TV. They also watch. 8:20 Show over. There is conversation about Jaws II being on HBO next month. J asks if family has HBO. F: No, it's too bad we don't have HBO (as on screen there appears a notice saying that the program just on was a presentation of HBO). What's that say? J: Looks at screen. M: (Reads notice to J) J gets the message and M rubs in what a dummy he is.

(3) School Related. Literacy events coded into this domain were embedded in activities which are directly related to the institution of the school. In

most cases the particular material serving as the focal point of the event came directly from the school. In other cases the direct link to the school was provided by the participants in the events labeling their ongoing activity as being school related. For examples, literacy events were coded in this domain when siblings were "playing school" or when parents were getting their children "ready for school" or when parents were helping their children "do better in school." Parents or siblings organized these types of events around workbooks purchased at the supermarket or other literacy technology such as tablets and cut-out pages of magazines. Some examples of school related literacy events are presented below.

Field Notes October 22, 1981 Literates Alone (30 sec.) School Related	Mother, I and TC sitting outside. TC running up and down stairs. The two boys come home carrying a flyer from school. Javier and Geraldo hand mother their flyers. Mother takes one and flips it to Spanish side. Mother looks at it, tells O it is another announcement.
Field Notes July 29, 1981 School Related Literates Alone (7 min.)	Sister (6 year old - S) gets out packet of word flash cards (she got these from 10 year old neighbor child who was given them at school to practice reading because he doesn't read well). S goes through cards, one at a time, trying to say each of them. TC tries to participate but S won't let him. Soon TC, S fight over cards, M comes in from other room and stops activity.
Field Notes January 6, 1981 Literates Interactive (15 min.) School Related	The family was watching Kung Fu movie on television. TC is in the room with the rest of the family. During the movie Olga asks her father what the movie was about. Father tells Olga, "Why don't you write down what you think the story is and I will look at it." Father said this in an angry tone of voice. (I found out later that about this time

the parents were realizing that though their daughter was receiving good grades in school [a good student] her level of achievement did not meet the parents' expectations).

Olga retrieved her notebook and began to write down what the movie was about. At the top of her paper she wrote, "The story was about...?"

As Olga wrote, she watched portions of the movie. When she finished she took her notebook up to her father. Her father looked it over telling her that her writing has improved but that she would have to make her letters straighter. After father gave her notebook back, Olga put it by the TV and continued watching the movie.

Field Notes
June 23, 1980
Literate - TC Interactive (68 min.)

5:25 The TV show mother and TC have been watching is just about to go off when Mother decides that now might be a good time to "have school." M sets up the Magic Erasable Writing Board (plastic card board approximately 12 x 18, with faint green lines printed across it) which M had bought for TC.

TC begins trying to write a Z, gets frustrated. M writes a Z, says:

M: There's a Z.

TC: Z.

TC makes A.

M: That's a nice A. You could make them smaller so they fit in the lines.

TC then makes L's.

M: Oh, you're L. (TC begins making more lines on L's) Oh, what are you turning it into?

Ends up with ____

M: You got carried away. E's only have a line in the middle. An F has two lines. An E has three lines. Yours has (counting 1-7) 7 - too many.

TC makes an E.

M: That's right.

5:30 M talks to O about her job. TC continues writing on master paper (diagram of letters with directional arrows to aid in letter formation) with alphabet diagram.

5:37 TC and M put Magic Writing Board away. TC washes hands.

5:39 Return to table.

M: Do you want to do words or puzzles?

TC: Puzzles.

M hands TC bunch of animal puzzle pieces. It has names of animals written over the animals. M helps her match the pieces.

M: What's this one say?

TC: Lion

M: And this one?

TC: Baby one.

M: Lion cub. That's what they call a baby cub.

After puzzle together M 'quizzes' TC:

M: Where does it say elephant?

TC points to correct word, says it, following word with her tiger (etc. for monkey, giraffe, camel, lion, lion cub).

5:46 M brings out bunch of larger and smaller cards.

Task is to march words (Mouse, pig, apple, zoo, et al.).

5:58 M brings out small paperback book from the learning skills kit. Roger and the Elephant. M has TC look at different pages and describe what is happening. Go through whole book, page by page.

6:00 M brings out Magic Board. TC writes on it alone for 5 minutes.

6:12 TC opens Sesame Street magazine to page where there is letter matching exercise. M tries to get her to do this and other activities in the book. M reads certain portions to TC. At some point M will read question and TC will circle answer. Or TC will put X on the word _____. Also pages with shapes.

6:21 M tears printed ad insert out of Sesame Street Magazine, goes to TC, and puts away magazines TC writes on insert. TC continues writing on paper, Magic Board 10 minutes alone while M, F, O talk.

Event ends at 6:35 when all go into living room.

(4) Religion. Literacy events coded into this domain were embedded in activities which are directly related to religious practices. A distinguishing feature of literacy events which occur in this domain is that they typically involve more sophisticated literacy skills than do events in most of the other domains. For example, it was not uncommon for these events to require individual or group text analysis skills as a part of Bible study sessions. We present two examples of this type of literacy event below.

Field Notes
October 28, 1980
Literates Alone
(30 min.)
Religion

The kids are in the TV room watching cartoons. M decides to study the "word" and goes to her room to get her books. M emerges with "aid to under standing the Bible and two versions of the Bible (King James and a Jehovas Witness translation) a tablet and a pencil. She goes to the kitchen table, sets up and begins studying. Again, M uses all three books, first reading one then the other. She is also taking notes on some of what she is reading. On her tablet I notice the following headings for sections of at least one paragraph in length; Exodus 20:4, Matthew 6:9, First Corinthians 11:1-10 and Ephesians 5. Sharre and Toussant arrive home from school. M pauses to answer questions and give supervision. Then she's back to studying for several more minutes. The event ends when Arthur breaks a window.

Field Notes
November 6, 1980
Literates Interactive
(90 min.)
Religion

M and O are sitting in the TV room chatting. M has just finished disciplining TC's. Nickie is now in her room pouting, Arthur is seated quietly seeming to be waiting for the right moment to get (1:00) back into action. Shirley comes over to visit. One of the first questions she asks M is what she thought about the election. M's response was that they represent nothing more than "men playing games", that in fact, they not only did not govern her but they were also incapable of governing themselves. Shirley responded by saying she was disappointed that Carter had lost but perhaps Reagan could really turn the country around. M replied that only Jesus could do that and that this is his kingdom and He is our true king. To prove her point she gave Shirley the Bible and instructed her to read a particular verse. When Shirley finished M interpreted it for her and expanded on that interpretation adding meaning and verification by getting Shirley to read other verses. The conversation was mediated by the Bible throughout and ranged from the original focus to include false prophets, false religions, the destruction of the planet, how many people will be left, etc. Throughout this event TC's were both in and out of the room. Once Arthur puts his hands on a magazine but did not open it. The event ends when Shirley must go home to be there (2:30) when Danny gets home from school. (The Bible is intimately involved in this event, several verses from the Bible are read as part of the discussion of all the topics).

(5) General Information. Literacy events coded into this domain were embedded in activities which can be most accurately labeled as accumulating general information. The information being accumulated covers a wide range of topics and may or may not be used at some future time. Examples of this type are presented below.

Field Notes
September 3, 1981
Literates Alone
(13 min.)

This is a concurrent event. While M, TC and O interact in the living room, Grandma sits in the dining area reading the daily newspaper. No comments are made to or by her concerning her activity for 13 minutes, then:

GM: Look Patty, your buddy's in the paper again.
M: What'd he do now?

M goes into the dining area, skims the article. She makes no comment on the content of the article, other than shaking her head. Grandfather returns home from K-Mart. Activity changes and centers around grandfather's shopping trip.

Field Notes
December 3, 1980
Literates Alone
(10 min.)
Field Notes

Mom is preparent to go to the market, F is in the kitchen paying bills and Nancy (age 24) is in the TV room with all four kids. Nancy had the TV turned to channel 5 waiting for Wonder Woman to come on. In the meantime news and advertisements are being displayed on the screen. Nancy reads this print until Wonder Woman comes on.

(6) Work. Literacy events coded into this domain were embedded in activities which are directly related to employment. In most cases the literacy events in this domain were associated with producing a product, performing labor or providing a service which is exchanged for monetary resources. However, in some cases the literacy event was associated with either gaining or maintaining the opportunity to earn money in this way. Some examples of employment related literacy events are presented below.

Field Notes
October 9, 1980
Literates Alone
(15 min.)
Work

When M, A and O enter the TV room Nickie is watching "Love Boat" and Nancy is reading the classified ads (looking for a job). For the next several minutes Nancy alternates between reading the paper and glancing up to look at the TV. The activity ends and Nancy puts the paper down and focuses on the TV.

Field Notes
September 11, 1981
Literates Interactive
(2 min.)
Work

Children were watching television. TV is located in same corner of room where kitchen table is. Father brings a flyer he received from work over to me and asked me to read it and explain it to him. Flyer was about the procedures his employer would use in the event that cutbacks in employees would have to be made.

Parents discussed this with each other expressing their fear of what they might have to do.

Javier overhearing us asked father if he had lost his job. Father explained, holding the flyer, that he had not, the company was only telling the workers that some might lose their jobs, he did not think he would lose his.

Field Notes
August 28, 1980
Literates Interactive
(1 hr.)
Work

Two insurance men arrive to sell Larry a life policy. TC is now looking in the mirror and generally playing around in the room. N has stopped reading the paper and started playing with Player and talking with TC. The event directly involves the two insurance men and dad. The salesmen are using several charts and booklets to sell their product. All three men are reading the various material and the two men do a fair amount of writing. The event ends when the insurance people leave without a sale. They also leave a business card which Larry glances at then places on top of the TV.

Field Notes
March 20, 1981
Literates Alone
(10 min.)
Work

The children, including TC entered the house. Ralph asked his mother for something to eat. Mom, who was in the kitchen asked the children to sit at the table. The children were served their meal. Mom went into the living room, which can be seen from the kitchen, and sat with an Avon product catalogue.

Mother explained to me that this was a new "book" for her customers to look through. I sat with the children at the kitchen table. Mom got up once to serve me a tea but returned to her booklet of products. When the children finished we returned outside.

(7) Literacy Techniques and Skills. Literacy events coded into this domain were those where reading and/or writing was the specific focus of the ongoing activity. Thus, print was embedded in activities specifically organized to teach/learn literacy techniques, skills or information. These events were sometimes initiated by a literate person but more frequently they were initiated by the target child. In either case, however, at least one participant in the event and sometimes both participants are typically required to

abruptly shift out some unrelated ongoing activity in order to participate in this type of event. A few examples are presented below.

Field Notes
January 5, 1981
Literate - TC Interactive (30 sec.)
Literacy

TC has been going in and out playing "cowboy" while M and O chat. After several minutes, TC enters kitchen. M tells TC to sit in living room and "write" for a while. TC replies that he would rather play. M tells him that she will not take him to the park if he does not write. She tells him to write in his "book" (libro), referring to his steno tablet.

TC goes into the living room, picks up his tablet and a pen from the corner table and writes for about 30 seconds. He then returns to play activity. When questioned by M (who is in kitchen) TC replies, "I already wrote" (trans.). He shows his page of many large circles to M. M tells him he did not write, he only scribbled. M allows TC to return to play activity.

Field Notes
April 16, 1981
Literates Interactive
Literacy

TC is sulking as Ruben looks at TC's Wildlife book. Linda is asking M where the crayons are, saying she wants to color. Amalia (Linda's mom) tells Linda that she wants her to write, not color. She tells her that nothing is gained from coloring. Linda picks up TC steno pad and writes. She writes names of all the people in the room. She shows the list to O, then to Mom who tells her it is very nice. Linda then tells Ruben to practice his name.

Field Notes
October 6, 1980
Literate - TC Interactive (1 min.)
Literacy

Family has been hanging around. TC shows O one of sister's (Becky ? years old) school papers, says "Look, O, Becky's".

M (to TC): Do you know what letter that is?
TC: Letter
M: P
TC: P
M: Yeah, that's right...letter P. You know what starts with letter P- pain in the butt-pug face.
TC: Yeah, letter P.

Brother reenters room TC distracted, watches TV.

(8) Interpersonal Communication. Literacy events coded into this domain were embedded in activities organized to communicate with friends or relatives using print as the means for reaching across time and/or distance. A few examples of this type of event are presented below.

Field Notes December 15, 1980 Literates Interactive (15 min.) Interpersonal Communication	When O arrives sister (20 year old Patty) and her husband (Frank) are in the midst of writing a personal message on a Christmas card they are sending to Frank's family in Mexico. F has written a message in Spanish on a piece of paper. P is copying the message on the card itself. P asks questions about spelling from time to time and reads parts aloud. F also reads to self after P finished copying.
Field Notes December 5, 1981 Literates Interactive (1 min.) Interpersonal Communication	10:37 TC and brother were playing army. Mother began writing a letter sitting at the kitchen table. During his play Geraldo asked mother who she was writing the letter to. Mother said, "To my mother." Geraldo said, "What are you going to tell Nana?" Mother, "Oh how good you've been and when we will visit her." Geraldo, "Oh are you going to tell her to get us a present." Mother, "Oh Geraldo you are not supposed to ask for presents." Geraldo, "Tell her just a small one." Mother and I chuckle and she says to me, "Oh look at how these children are." Mother returns to her writing.
Field Notes February 8, 1980 Literates Interactive (3 min.) Interpersonal Communications	O arrives at house and M and F are reading a letter from a friend in Oregon. They are standing side by side reading, occasionally pointing to text and discussing contents of message. After 3 minutes TC leaves house to go to neighbors.

Story Book Time. Literacy events coded into this domain were those where a caregiver reads to a child or children in the family as a part of the caregivers routine activity. Of course, not all events in which a caregiver reads

to a child involve books which contain a narrative account (story). Typically books involved in these events were alphabet books or books which have objects pictured with their corresponding labels; such labels contain no story line at all. However, the term storybook time is meant to include such readings and emphasize the planned regularity of the event.

The domains of literacy activity presented above organize the literacy events we observed according to salient features of the contexts within which the events were embedded. Our analytic system provides an accurate description of the functions of literate practice as they emerged out of the activities of the people we worked with in this study. This organization of events clearly indicates that certain types of literate practice, such as those embedded within peoples daily living routines, are virtually a necessity of life in a complex literate society. However, the construction of this analytic system is possible precisely because the literate people in our sample did not restrict their reading and writing activities to those which are

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Insert Table 15 about here

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necessary for managing their lives in this society. Table 15 summarizes the density of literacy activity which occurred in the nine domains. In the interest of clarity and for ease of comparison we have unpackaged two of our domains in this table. First, we have differentiated the entertainment domain according to the three ways print enters into this activity. Second, we have differentiated the literacy techniques and skills domain according to who initiated the event. We will repeat this procedure in all future presentations of the domains.

Table 15

Average Density of Literacy Events by Contexts
Per Hour of Observation

	Time		Frequency	
	Average Minutes	Percentage	Average Freq.	Percentage
Daily Living	1.41	16.6	0.18	22.6
Entertainment Source	1.81	21.4	0.12	15.3
Entertainment Instrumental	0.28	3.3	0.09	11.7
Entertainment Media	0.03	0.4	0.01	0.9
School Related	1.26	14.9	0.09	11.0
Religion	1.37	16.2	0.03	3.1
General Info.	0.74	8.8	0.07	8.1
Work	0.10	1.2	0.01	1.5
Literacy Techniques and Skills				
Literate Initiated	0.21	2.5	0.03	4.2
TC Initiated	0.64	7.5	0.11	14.1
Interpersonal Communication	0.18	2.2	0.03	3.1
Storybooks	0.14	1.7	0.01	0.8
Totals	8.17	100.0	.78	100.0

Considering both time and frequency the highest density of literacy occurred within Daily Living, Entertainment (Source), School Related, General Information and Literacy Techniques and Skills (TC Initiated) Domains (Percentage Range = 7.5% + 22.6%). The lowest density for both time and frequency occurred within Entertainment Media, Work Related), Literacy Techniques and Skills (Literate Initiated), Interpersonal Communication, and Storybook Domains (Percentage Range = 0.4% to 4.2%) Entertainment (media) was more dense in respect to Frequency (11.7%) as compared to Time (3.3%) and Religion was more dense in respect to Time (16.2%) as compared to Frequency (3.1%).

Insert Table 16 about here

Insert Table 17 about here

Quantitative Summary. Table 16 and Table 17 summarizes for each of the households, the average frequency of events per hour of observation and the average amount of time spent in activities involving reading and writing, according to the domains of literacy activity. First, it should be noted that all of the target children had an opportunity to observe literacy serving a variety of functions in the lives of the literate people in their environment and that all but five of the target children initiated events which focused on literacy techniques and skills. It should also be noted that there is considerable variation by families within any particular domain and considerable family to family variation with respect to literacy activities across the domains.

TABLE #16

FREQUENCY OF LITERACY EVENTS PER HOUR OF OBSERVATION
BY CONTEXTS OF LITERACY ACTIVITY

	CONTEXTS OF LITERACY ACTIVITY											
	DAILY LIVING	ENT. SOURCE	ENT. INSTR.	ENT. MEDIA	SCHOOL RELATED	RELIGION	GENERAL INFO	WORK	LITERACY TECHNIQUES & SKILLS		INTERPER. COMM	STRYBK TIME
									LIT. INIT.	TC INIT.		
Mike	.09	.07	.19	.04	0	0	.04	0	.06	.06	0	0
Bobby	.26	.02	.04	0	.02	0	.02	.02	0	.02	.04	0
Barbara	.31	.06	.08	0	.02	0	.06	.02	0	0	.04	0
Myeesha	.09	.01	.02	.01	.01	0	.02	.01	0	.03	.01	0
Kristin	.10	.30	0	0	0	0	.10	0	.10	.05	.30	.05
Alex	.12	.06	0	.03	.15	0	.06	.03	.03	.03	0	0
Becki	.64	.50	.12	0	.17	0	.43	0	.13	.21	.04	.04
Paul	.15	.03	.02	0	.24	0	.07	0	.08	.05	.02	0
Holly	.08	0	.02	0	.02	0	.04	0	.04	.45	0	0
Natalie	.10	.11	0	0	.04	.15	.07	.01	0	.01	0	0
Amin	.14	.10	.01	0	.04	.12	.08	.01	0	0	0	0
Denise	.20	.14	.06	.01	.15	.03	0	.04	0	.04	0	0
Harvey	.29	.09	0	0	0	0	.02	0	0	0	0	0
David	.20	.07	.08	0	.05	.02	.09	0	.03	.02	0	0
Alethia	.22	.37	0	0	.14	0	.14	0	0	.37	0	0
Lori	.04	.04	0	0	0	.11	0	0	.01	0	0	0
Alma	.04	.17	.04	.02	.10	0	.01	.02	0	.06	0	0
Luis	.04	.03	.05	0	.01	0	.03	.10	0	.09	.01	0
Juan	.15	.12	.03	.03	.12	.09	0	.03	0	.12	.09	0
Maria	.06	0	0	0	.13	.07	0	0	0	0	0	0
Terri	.30	.17	.06	0	.02	0	.04	.02	.04	.19	0	.06
Roberto	.12	.07	0	0	.22	0	.02	0	.12	.14	0	0
Ronnie	.06	.04	.06	0	.02	0	.06	.04	0	.27	0	0
Miguel	.22	.14	.02	.02	.10	0	.04	0	.11	.16	0	0

TABLE #17

MINUTES OF LITERACY PER HOUR OF OBSERVATION
BY CONTEXTS OF LITERACY ACTIVITY

	CONTEXTS OF LITERACY ACTIVITY											
	DAILY LIVING	ENT. SOURCE	ENT. INSTR.	ENT. MEDIA	SCHOOL RELATED	RELIGION	GENERAL INFO	WORK	LITERACY TECHNIQUES & SKILLS		INTERPER. COMM	STRYBK TIME
									LIT. INIT.	TC INIT.		
Mike	.45	.67	.92	.28	0	0	.14	0	.40	.46	0	0
Bobby	1.87	.10	.75	0	.29	0	.10	.03	0	.22	.47	0
Barbara	2.30	.39	2.14	0	.28	0	.15	.03	0	0	.45	0
Myeesha	1.68	.04	.08	.12	.49	0	.26	.42	0	.13	.04	0
Kristin	.18	2.41	0	0	0	0	.30	0	.90	.05	1.61	2.01
Alex	.41	.43	0	.11	1.07	0	.29	.06	.06	.01	0	0
Becki	4.09	7.07	.18	0	.28	0	3.92	0	.51	1.23	.30	.45
Paul	.77	.26	.03	0	.95	0	.18	0	.23	0	.05	0
Holly	.43	0	.39	0	4.86	0	.53	0	.08	1.02	0	0
Natalie	1.75	1.62	0	0	.89	9.37	.69	.18	0	.23	0	0
Amin	1.85	1.48	.02	0	.89	8.64	.59	.18	0	0	0	0
Denise	1.91	3.92	.19	.14	3.03	.36	0	.87	0	.24	0	0
Harvey	3.12	1.45	0	0	0	0	.48	0	0	0	0	0
David	2.11	1.16	.85	0	.51	.03	.74	0	.37	.25	0	0
Alethia	3.19	7.25	0	0	2.70	0	.52	0	0	4.89	0	0
Lori	.63	.21	0	0	0	3.01	0	0	.21	0	0	0
Alma	.16	1.98	.16	.06	1.17	0	.05	.24	0	.24	0	0
Luis	1.08	.24	.02	0	.10	0	.27	.01	0	.41	.10	0
Juan	.26	.94	.03	.01	.36	.57	0	.06	0	.82	.18	0
Maria	.10	0	0	0	1.09	8.14	0	0	0	0	0	0
Terri	.70	.22	.30	0	.86	0	.30	.04	.11	1.83	0	.65
Roberto	.15	1.01	.04	0	1.51	0	.06	0	1.58	.71	0	0
Ronnie	.40	.65	0	0	.06	0	.36	.07	0	.57	0	0
Miguel	1.34	.37	.08	.11	.45	0	.13	0	.21	.46	0	0

A close inspection of Tables 16 and 17 reveals certain patterns regarding the domains of literacy activity. To begin, the domain of Daily Living routines was one in which activities were comparatively frequently mediated by literacy. This finding was a relatively consistent one across families. It is also interesting to note that Daily Living routines tended to be a domain of activity where few Literates-TC literacy interactions took place. Thus, although a significant proportion of the adults' literacy was involved with Daily Living activities, adults did not tend to involve their children on these occasions.

Another finding is related to the domain of Work: There was a general paucity of literacy associated with activities in this domain. The parents who worked were generally employed in unskilled or semiskilled jobs. We do not know how much literacy was involved in their actual activities while at work because we did not observe the parents in that setting; however, when we consider what their jobs were and what we have learned through interviews about the literacy connected with those jobs, we hypothesize that it was actually quite little. One thing that we can say for certain is that almost no reading or writing associated with work of parents' 'spilled over' into the home environment.

One other significant domain where adults were involved in literacy was Religion. However, literacy-related activities in this domain was by no means consistent across families. In fact, the time spent reading and writing related to Religion was accounted for primarily by Natalie, Amin's and Maria's parents, and then to a lesser extent Lori, Juan and David's parents. It should also be noted that, with the exception of Denise and David's families,

the frequency of these events across the remaining families do not differ in any substantial way. The events in this domain of activity were all associated with religious practices. Actually, they involved reading and interpreting the Bible and, on occasion, writing about the understandings and interpretations developed.

Similarly, there was substantial variation among families with respect to the extent to which Entertainment and General Information activities were mediated by print and to which School-Related Literacy entered the home. Also, the number of Literacy Technique and Skills events varied greatly. Storybook time as a domain of activity was found in three of the homes but not in the others. Finally, there was for the most part little mediating of Interpersonal Communication activities with literacy. In only one home was there considerable writing of letters or notes.

The quantitative results presented above examine the domains of literacy activity as they occurred in each of the participating families. We will now present a quantitative summary of the domains of literacy activity as they resulted from variation on the two primary predictor variables. Table 16 above indicated that the domains of Daily Living Routines, Entertainment, School Related, Religion, Literacy techniques and Skills and Storybook time yielded some differences on the time and frequency measures as a function of variation on the demographic factors. Statistical analysis of the data presented in that table indicates members of Black families spent more time in Daily Living Literacy (Mean = 2.03) than did Chicanos (Mean = .52). Anglos were indistinguishable from either group in this regard ($p = .0171$, scheffe = .0?). No significant differences among these three groups were found with

respect to the frequency of Daily Living literacy events. Blacks also more frequently engaged in religious Literacy events (Mean = .02) than did Anglos, who engaged in none (Mean = 0). Chicanos were indistinguished from either group in this regard (p = .0352, Scheffe = .05). However, because of high variability within the Black sample, there was, only a tendency for Blacks to distinguish themselves from Anglos in terms of time spent in religious literacy (Means = 2.68 and, p = .1932, Duncan = .10). There was also a tendency for Anglos to more frequently engage in Literacy Techniques and Skills Events (Mean = .06) than did Blacks (Mean = .01). Chicanos were indistinguishable from either group in this regard (p = .0701, Duncan = .05).

With respect to sex, families with female TCs spent more time using print as the source of entertainment (Mean = 2.59) than did families with male TCs (Mean = .73) (p = .0513). Families with female TCs also evidenced a tendency to more frequently engage in literacy as a source of entertainment (Mean = .16) than did families with male TCs (Mean = .07) (p = .0859). Finally, families with female TCs also tended to spend more time in literacy (Mean = 1.80) than did families with male TCs (Mean = .52) (p = .0789) and more frequently engaged in storybook time activity (Means = .01 and 0 respectively, p = .0732).

Chapter IV

Discussion

This study addressed the following question: What are the sources of those life experiences that lead to the development of literacy? We addressed this problem because of a concern we share with many fellow citizens and scholars. We are concerned about the fact that the school achievement of America's poor, in particular those among the poor usually referred to as "ethnic minorities" falls short of that of Americas "mainstream" students. We also share a belief in the relevance of literacy to schooling; only in exceptional circumstances are the two separable for all practical purposes (see Scribner and Cole, 1981). However, based on the findings of this study we do not share key assumptions that seem to characterize a great deal of the literature on the sources of what are considered high levels of literacy/schooling achievement in children: (1) the assumption that books provide the only valuable source of literacy experience for preschoolers, and (2) the assumption that ethnic/cultural factors mitigate against literacy development and practice.

(1) The Equation of Literacy with Books

Clearly, few would argue with the assertion that the United States is a literate society. Writing and its associated technologies are central to the organization of industry, government, science and education. "Get it in writing" is not merely a saying; it is the accepted legal practice. Literacy is also extensively used by businesses in their dealings with the public. Advertising, product labels, billing systems, directions, receiving and giving

out the family income all make extensive use of written language. In the United States, literacy is an integral part of food gathering, the acquisition and maintenance of shelter and clothing, transportation, entertainment and other recreational activities. Literacy seems to be involved in many of the essential domains of human activity as they are organized in the society.

Despite the obvious importance of literacy to everyday functioning in many different contexts, it has appeared plausible for social scientists to concentrate their attention on only a few of these, especially cases where parents engage their children in reading in a deliberate and planned manner. Book reading, story book time and other experiences related to books (Wells, 1981; Scollon & Scollon, 1979; Varenne et al., 1981) are not the only sources of literate experience although these are the ones typically focused on when considering the child's preparation for school. In summarizing this body of research, Heath (1980b:15) informs us that children with book reading experience at home arrive at school already socialized into the school preferred approach to teaching literacy. With such socialization the school can best capitalize on what the child has already learned about print and its functions and meaning through early exposure to books. Thus, one predominant source of poor school performance of lower class children is considered to be a lack of experience with books.

However, as the results of this study show, book reading, story book time and other experiences related to books are <u>not</u> the only sources of literate experience even among the urban poor of the U.S. In fact, it represents a minority of heterogeneous activities involving print. The low-income children who participated in this study had considerable experience with print that did

not include books.

Everything we know as social scientists suggests a very simple truth: the literate practice observed within a group can best be accounted for by examing the external restrictions on the uses of literacy within a community. In West Africa, Scribner and Cole (1981) show this to be true of the Vai: the extent and structure of literate skills practiced by the Vai matched the range of contexts and functions encountered in their daily lives. Vai literacy is restricted because many of these contexts where literacy would be functional are under the control of government agencies, schools, modern economic institutions, etc. In so far as American communities are also defined by the constraints which shape them, we need to know the contexts in which literacy is practiced and the links between local contexts, in order to say much about literacy development. In fact, the whole notion of levels of development is seen as contingent; contingent in this case on the overwhelming power of the school for determining entry into a wide variety of important contexts. Consequently, we sought not only a principled, replicable, description of different learning contexts, but some notion of the frequency of different kinds of events, as a basis for characterizing the patterns that make up different fundamental "kinds" of literate activity in homes where young children are being raised.

As Table 16 in the previous chapter indicates the average preschool child who participated in our study either observed or participated directly in 8 minutes of literacy during every hour of observation. Also, nearly once every hour a literacy event occurred which our preschool children either observed and or participated in. If we take into account that the average low-income

child who participated in our study is awake 10 hours per day, we can then estimate, if our sample is representative, that this child is going to either observe or participate in nearly 8 literacy events or about 81 minutes of activity involving print, virtually every day of his/her life. However, these events are not organized one after another nor is all the reading/writing time condensed into one period. Rather the frequency and time of events is distributed across the nine domains.

Table 16 also reveals that the domains of activity where print most frequently becomes involved are: Daily Living, Literacy Techniques and Skills, Entertainment (where print is both the source and instrumental to the entertainment activity) and School Related activities respectively. Regarding the amount of time spent in literacy events, the highest percentage is committed to Entertainment (where print is the source of the activity) followed by Daily Living, Religion and School Related activities.

In addition to our data we also know from the work of Heath (1980a&b) that even among working class people, there are many ways, in addition to reading books, that adults arrange for their children to come into contact with print, shaping their notions of what it is all about. With respect to deliberately constructed contexts in which parents teach their children about print, her reports are quite detailed and suggestive. She notes different orientations toward the kind of reading that one will need to do in school that split along both class and ethnic lines, arriving at three different configurations of home literate activity with three resulting patterns of school-home correspondence.

Based on such evidence, and the data summarized in this report we may conclude that literacy is not absent in low-income homes. Literacy is a skill which encompasses a wide range of everyday practices. These practices are important aspects of the knowledge people acquire about literacy.

(2) Ethnic & Cultural Aspects of Literacy Development

As an ethnically and socially diverse group of social scientists, our research group[4] was also very concerned with seeking to clarify the basis upon which such phrases as "ethnic group differences in literacy," or "literate practices associated with poor people" are used. In our opinion, far too much emphasis has been given to the "cultural" impediments to literacy, making it difficult to see the ways in which social and institutional forces operating on groups of people structure their exposure to, and uses of, print.

Hence, in our analysis we were especially concerned to link practices in the home to the social sources from which they sprang. In effect, we asked, "when we see a literate practice in the home, where did it come from?" When we see cultural forces at work, we see resources for coping with print, as part of the mix.

Ethnic Group and Cultural Contrasts

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4. Anderson, A. B.; Stokes, S. J.; Teale, W.; Martinez, J.; Bennett, R.; Vaughn, B. E.; Forrest, L.; Estrada, E., Laboratory of Comparative Human Cognition, UCSD.

When we compared the experiences that families in our population had with literacy across the domains comprising our analytic framework, we found; 1) all families came into contact with print, and 2) there was considerable variability distributed across all families in all ethnic groups. In turn, the frequency and duration of particular experiences that a preschool child has with print are apparently determined in large part by the interactions that their parents and other literate people in their home have with various organizations and institutions that exist outside the home. These experiences do not seem to be determined by the cultural arrangements particular to each ethnic group.

Results reported in the previous Chapter indicate that the patterns of activity by ethnic group differ across the nine domains. However, the differences are statistically significant in only four of the domains of activity; the duration of Daily Living events and Entertainment events (where print is instrumental), the frequency of Religious events and the frequency of Literacy Techniques and Skills events. Below we present examples of the events we observed in each of these four domains. While the examples do not necessarily represent the range of events in that domain, we intend for them to provide an indication of the source of the statistical differences.

Daily Living. Many of the events we observed in the domain of Daily Living involved consumer goods strongly derived from the trade economy. No between group difference were obtained with respect to the overall frequency of Daily Living encounters. However, Black families spent significantly more time ($p = .02$) involved in these kinds of events than the other groups (see Table 19). While the sources of these differences still merit further inves-

tigation, the following examples of lengthy events suggests how they may arise. The first event describes the actions of an Anglo mother and the second event describes the actions of a Black father.

Field Notes April 14, 1980 Daily Living Literate Alone (8 min.)	1:05 Mother comes into the living room where TC is. She is reading a letter from one of the companies she has an account with (5 min.). 1:13 Mother gets out an old Pampers box which is stuffed full of bills and receipts. She searches through this material and finally pulls out one thing. Then mother writes a note and addresses an envelope (3 min.).
Field Notes December 3, 1980 Literate Alone (30 min.)	Mother is preparing to go to the market, TC is in the TV room with all of the kids. Father is in the kitchen paying bills. He is using a tablet where he writes the payee, amount paid and date paid. His procedure is as follows; opens the bill and reads it, writes a check (properly recording it.) Enters the transaction on his tablet, writes paid on the customers copy of the bill, files that in a shoe box with what appears to be other records of payment receipts, stuffs the envelope then repeats the procedure with next bill. Throughout the event TC is in and out of the kitchen, sometimes pausing to watch what F is doing, and chat with him. The event ends when father pays the last bill.

In most respects, except time, the two events are remarkably similar. The social label we can assign to the actions that take place in these events is "paying bills." The material involved in both events were records of economic transactions and both people even have these records stored in a handy box. The particular procedure for "paying bills" also appears to be generally the same; (1) read the bill, (2) write a response (a note or a check), (3) make a record (which appears to be optional) and (4) address an envelope. In the case of these two events the difference in their duration is accounted for by the difference in the number of bills being paid.

Religion. While religious literacy will be discussed in more detail in the next section of this paper, we will indicate here that Black families more frequently engaged in religious literacy activities than the other groups ($p = .0352$). Chicanos were indistinguishable from either group in this regard (see Table 19). The same pattern of results was found in respect to time, although Black families were highly variable in this regard ($p = .1932$).

Entertainment. Many of the businesses in the United States design and distribute print material which become a part of leisure time activities. The proliferation of print materials for entertainment no doubt contributed to our finding that entertainment represent the most frequent use (27%) of literacy in the low-income homes we visited during the past two years. Across all three groups we found no difference in the frequency with which print was used in an instrumental way for entertainment. But Anglos spend more time engaged in activities where print material enters in a way that is instrumental to the entertainment activity ($p = .10$). The sequences presented below provide us with one example of how Anglos spend more time in these kinds of events along with some other interesting information which we will discuss after the events have been presented. The first two events were recorded in a Black family and the last event was recorded in a White family.

Field Notes August 28, 1980 Literate Alone (2 min.) Entertainment (I)	The insurance men have just left and mother and father are discussing what the insurance men had to say. TC is on the floor with a toy (but she seems to be paying more attention to the conversation of her parents) when mother and father finish reviewing the visit from the insurance man, father picks up the TV guide to select a program. Father reads through the guide for a few minutes, puts it down and tunes in a boxing match on ESPN.

Field Notes
August 28, 1980
TC Alone (5 min.)
Reading (TV Guide)

Father has just finished reading the TV guide and is now watching a boxing match. Mother is reading the classified ads when TC goes over and picks up the TV guide that father just put down. TC begins paging through the TV guide pausing and focusing her gaze on pages that have pictures. The event ends when TC apparently tires of the activity, puts the guide down and begins wandering around the room apparently looking for something else to do.

Field Notes
April 1, 1980
Lit./TC Interactive
Entertainment (I)
(13 min.)

4:30 When M puts K to bed, TC sits on couch, still watching TV.
4:32 TC puts head on pillow, continuing to watch TV. M comes back to couch. TC says he doesn't like the show he is watching (Sigmund and the Sea Monsters). M goes to TV to get TV Guide She looks through.

M: Gilligan's Island is on.
TC: What else is on?
M: Tom and Jerry.
TC: I'll watch Tom and Jerry. Is Superman on, too?
M: Uh-huh (yes).
TC: What else after Superman?
M: Starsky.
TC: What's after Starsky?
M: Happy Days.
TC: What else after Happy Days?
M: PM Magazine.
TC: What else?
M: What's after what? PM Magazine?
TC: Uh-huh (yes).
M: (Pointing to book) Two holiday specials.

4:36 TC takes TV Guide from M. Flips through and looks at for approximately 1 minute. During this time M's brother-in-law (20's - J) comes in. M and J talk a bit.

TC: Mom, when is that going to be on? (Pointing to a picture/ad in Guide)
M: (Did not catch response she made)

TC resumes looking through Guide.

4:41 TC: Mom, when's this one going to be on? (pointing to another picture/ad)

M: (Looking at Guide) Sunday.

(5 sec. as TC looks at Guide.

TC: Look what I'm gonna watch though. (Pointing to another)

M is at this point talking to J; She gives no response to TC.

4:43 TC drops Guide on floor, lies back on couch and watches TV.

Besides the fact that the literacy event lasted for 13 minutes in the Anglo family and that the two events in the Black family lasted for a total of 7 minutes, these events also represent occasions when parents have differently organized literacy experiences for their children. In each case we see the same type of print material being used by a literate adult and a preschool child. In each family the print material is what connects the actions of the individuals. The actions of the adults are in some ways quite similar, yet they are different in important ways. Both parents read the listing of programs but one does it interactively with her child and the other parent doesn't. This difference in the actions of the adult are related to the differences in the actions of the two children. Yet when the children are alone with the TV guides they seem, at least on the surface, to be doing similar things with it.

Literacy Techniques and Skills. The events we observed in the domain of Literacy Techniques and Skills focused on the production or comprehension of print symbols. Many of these events also provided the preschool child with value statements regarding literacy, e.g., "it is better to write than color." While all of the events in this domain could be characterized as a literacy lesson, only a portion of them used the familiar initiation-reply-evaluation

sequence (Mehan, 1979). Our findings regarding the frequency of these kinds of events generally replicate those reported by Heath (1980b). It is the case that Anglo parents more frequently ($p = .07$) initiate activities which specifically communicate about the value of literacy or its techniques and skills. It is also interesting to note that, as Heath (1980a) found in Tracton, literate adults in Black families usually wait for the preschool child to initiate this kind of interaction rather than initiating it themselves (see Table 19). However, our data suggest that when preschoolers did initiate events in this domain, they tend to last longer in Black families than when they occur in Anglo families. The first event occurred in an Anglo family while the second event occurred in a Black family.

Field Notes
January 8, 1981
Lit./TC Interactive
(3 min.)
Lit. Technical Skills

TC has been writing alphabet. TC asks M about how to make G.

M: You remember. Like that (Makes a G for him).

Then TC sings the alphabet song 2 or 3 times. Each time he stops at P. Finally M sings (when TC gets to P) Q...

TC: How do you make a Q.
M: O with a line.

TC makes R, S. Then for T to the end TC asks M to write them for him on another page. She does. All of the E's are non verbal. TC pauses after producing each letter for some type of confirmation of correctness before producing next letter.

Field Notes
November 7, 1980
Lit/TC Interactive
(8 min.)
Lit. Techniques & Skills

Mother is watching Soap Operas. Delores is on the floor playing with her "pop-up" game (Perfection) when she notices a pencil and paper Kathy had placed under the sofa. D crawls over and pulls them out, then she begins to scribble. After about 2 minutes of this:

TC: Ma, I can't write my name.
M: Shh
TC: Continues to scribble alone
M: (1 min. pass and a commercial comes on) What did you say Delores?
TC: Nothing
M: You just said something about your name.
TC: Will you write my name?
M: No, but I'll help you. Bring me the paper.
TC: (Brings the paper and pencil to mom) who sits D in her lap) (Mom's comment: Now you hold the pencil like you gon write.) (When D does this mom wraps her hand around D's)
M: (Mom holds and guides her hand as they print DELORES. As they print each letter mom pronounces it first and then D pronounces them)
TC: That's my name. That says Dolores.
M: You got it kid.
TC: (Very proud of what they had just done and studying the word) And that's uh "O" (pointing at the O in her name), right ma?
M: Yea, now you go and write some more by yourself.

TC looks at her name for a few more seconds and then goes back to playing her "pop-up" game.

A final point should be made regarding the overall differences in patterns of literacy activity between the three ethnic groups which participated in this study. Overall, members of Anglo families involve print in their activities more frequently than the members of Black or Mexican-American families. However, Anglo families do not spend more <u>time</u> involved with print. Thus preschool children in Anglo families can be expected to either observe or participate in a comparatively larger number of literacy events than do their Black or Mexican-American peers. However, these events can be expected to be of comparatively shorter duration than those which occur in Black or Mexican-American families. By contrast, preschool children in Black and Mexican-American homes can be expected to observe or participate in comparatively

fewer literacy events than their Anglo peers, but for Black children these events can be expected to last for comparatively longer periods of time than they do in Anglo families.

Rethinking the Notion of Culture and Literacy

We started this study with the question: What are the sources of those life experiences that lead to the development of literacy, particularly among ethnic minorities and the poor? We were aware of the large body of social science research which suggests that the culture of America's poor and "ethnic minorities" accounts for their failure to develop sufficient skills in reading and writing to do well in school (See, Downing & Thackray, 1975; Cullinan, 1974; Simons, 1974 for reviews). Thus from the beginning we thought we would find that culture exerts particular influence on the child's development of literacy and that this would likely be the case even within our lower-class sample.

With these understandings in mind, we were careful to select our research sample in a way that would allow us to investigate this possibility. At the outset we reasoned--as many social scientists before us--that any variability in literacy activity resulting from ethnic group membership may reflect cultural differences in literate practice. However, when comparing the patterns of literacy practice presented by the three ethnic groups in our sample, we found it difficult to conclude that ethnicity was a uniformly significant source of differences.

Social Institutional Influences on Literacy

You will recall that the elements of the context which we used in building our descriptive scheme of domains of literacy activity were; (1) the source and type of material involved in the literacy event; and (2) the particular sequences of action that were clustered around the particular function of the material. Using these criteria to define the relevant features of the contexts where literacy occurs suggests that literacy is largely influenced by social institutions, not cultural membership.

In fact, the closest we come to a source of cultural influence on literate practice concerned religion. Even there, the organization of religious practice was not consistent with traditional accounts of an "oral tradition." The Black and Mexican-American families in our study who practiced religion were not engaged in "oral tradition." Quite the contrary, the churches our families attended encouraged and even required an active and assertive approach to print.

A close examination of Table 17 and 18 that in the families of four of our children the literacy carried out in association with religious practices is the most frequent and time consuming uses of reading and writing these children observe. A statement from Natalie's mother, Pauline, provides insight into this association between literacy and religion for these families.

> "Reading the Bible builds up your faith, the more knowledge you take in the more faith you have, it helps you build a better relationship with God... Besides, scripture says that from babes you should inculcate them with the Word."

Pauline's religious beliefs require her to learn and live "the Word of God." She explained that the only way to understand God's will is through consistent study and application in daily life of "His Word." His Word was for her learned both in the church setting and at home. Study of His Word at home involved reading and analyzing the Bible and making use of Bible study aid books. For Pauline "the Word" was her religion, and learning how to be a better analyzer of text was synonymous with advancing in her faith. In fact, most parents in these families were fundamentalist and in their church the congregation is responsible, under the leadership of the minister, for reading, analyzing and applying "the Word of God." Thus, we can see that as a result of the way in which their religious activities are conducted, these families are often involved with literacy. The "Word" also instructs these parents to get their children involved with the Word from the time that they are infants. This religious imperative led many of our parents who practice religion to include the children in their semi-weekly Bible study sessions conducted at home or at the house of friends. Sometimes Bible study groups were specially organized for the children. On these occasions an adult would lead a group of children through a reading and discussion of Bible stories or a review of the children's knowledge of the Bible. Also, one of our mothers conducted regular bedtime Bible reading events for her children. In these events the TC either "pretended" to read along with a literate person or said the Lord's Prayer while pretending to read it from the Bible.

Another factor which would seem to be a possible source of cultural influence is language or dialect. Some of our families spoke Spanish, and even more of our families frequently spoke vanacular Black English. Yet these factors seem to exert relatively little influence on the patterns of literacy

use that we observed during the study.

Anticipatory Preparation for Schooling

A more prevalent influence on literacy seemed to be the parents anticipation of their preschoolers going to school, the routine requirements of daily life, or passing time in recreation. Perhaps the most dramatic example of social influences comes from our one non-literate mother who exhibited a strong orientation toward literacy. Despite what would seem to be extreme impediments to literate practice, this parent organizes an incredible amount of literacy for her children. Cultural factors in this instance provide a different set of resources (i.e., Spanish language referents and style of interaction, e.g., Heath, 1980) but they do not appear, in themselves, to be impediments to literacy. The mother pushed the TC in rather creative ways to attain literacy and was improving her own skills as well. She was very much aware of the importance of literacy and of the constraints her limited literacy skills placed on her. She clearly did not want her children to be illiterate.

In her own efforts to improve her literacy skills, the church became a primary broker for literacy practice, even though the context of this practice was not religious. [5] Preparation for school (and presumably subsequent success) for the TC was the source for much of her literacy interactions with this child. One would not expect a middle class variety of parent-directed

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5. A sister from the mother's church visits the mother twice a week to teach her how to write. On one occasion the mother shows the observer her "assignment." The sister ("tutor") had written the alphabet, identified consonants and vowels and made some words by combination. The mother's homework assignment was to write a word for each letter of the alphabet.

storybook time in this family because the mother could not read well enough. However, several interactions around books (e.g., wild life encyclopedia, etc.) occurred in which the adult made up stories, attempted to sound out words, and named pictures. Even during play activities in the park the mother attempted to incorporate literacy by spelling out new words she had learned with sticks! The mother's own practice with literacy in effect was serving to get two jobs done at the same time--improvement of her own literacy skills and the teaching of these skills (and of the importance of the skills) to her child.

The following is an example of the mother's homework writing assignment which TC observes.

Field Notes
February 6, 1981
Literates Interactive
Lit. Alone (35 min.)
School Related

TC and Roberto are coloring in the living room. Yolanda is napping in the bedroom. M walks over to the TV set (also in living room), picks up a spiral notebook. She takes out several sheets of paper with writing on them; she stands there, studying/examining the sheets.

The boys stop coloring and begin to play. M chats with O about writing. Some of M's comments (translated):

> "They say the letters speak, but if you don't know what they sound like, you don't hear what they say."
>
> "Perhaps I am too old to learn."
>
> "If I could get some help--maybe one hour a day, I think I could do it."

M demonstrates that she can read a little of a religious pamphlet. She tells O that she can read a lot of the words in the pamphlet, but when it comes to writing, she just can't.

M chats some more, then shows Observer the words she came up with for her homework assignment. Many

errors were made. M had written DEO for DEDO; CSA for CASA and BLCA for BLANCA. M exhibited reversals d/b, etc. M's attempts to do well and her comments, made it impossible for Observer to refrain from helping her with her "homework." O helped M form words for approximately 30 min. TC was not present.

Here the mother engages in an interactive event with the TC ("reading" a wildlife encyclopedia):

Field Notes
July 7, 1981
Literate - TC Interactive (19 min.)
Entertainment (S)

TC has been writing and coloring. M sends him to wash up. When TC re-enters living room, M has the Wildlife Encyclopedia and is looking at the first two pages as if reading. TC sits next to M. He asks her what the picture is. M looks at caption and attempts to sound out a word. M makes an attempt then gives the book to TC, telling him to ask O what it says. (What M had been attempting to sound out was the photographer's name.) O reads Alligator, then TC takes the book back to M. They turn the page to the bear page; TC says "Lobo." M says 'no' but does not correct TC.

TC tells M he wants to see a picture of fish. M and TC discuss names of animals they pass in the book and what the animals eat. One page is the hippopotamus page. TC asks what it is. M does not know it in either Spanish or English.

M and TC finally come to the fish page. TC wants to know what the particular fish is called. M attempts to sound it out. She says something to TC (not heard by O). TC asks M several Why questions about the fish in the picture M makes up a story.

TC, tired, lies down, but continues talking about the animals pictured. He gets up 2 minutes later and looks at book with M. The procedure continues with bunnies, and birds (what and why questions). The snake section is next. After the snakes, TC requests a particular page again. He leaves through the book to find it for M; but cannot. He closes the book, turns it around, looks through it leafing from back to front. M doesn't like how he handles the book. She takes it from him and turns the page. M and TC continue what and why questions for other animals they see in the book for approximately 4 minutes. TC lies down again. M continues to look through the

book while TC drifts off to sleep.

M makes efforts to prepare TC for school even though she has little experience with it (i.e., school is organizing literacy activity through the parents' anticipation of it). M teaches TC what she knows about writing as she progresses in her own skills she teaches TC more. Thus, the mother presents material just outside of the child's present understanding and skills in a manner that (for her) is the natural developmental sequence for learning to read and write:

Field Notes April 30, 1981 Literate TC Interactive (40 min.) Literacy Techniques and Skills	TC has been writing off and on in the living room. He stops and helps Liz with the timer on the perfection game. M tells TC that he should be writing, not playing. M sits on the couch and sews. TC tries to get out of writing by complaining of being tired. M tells him that when he is in school the teacher will hit him if he doesn't write. TC picks up his steno pad. As he leafs through it he asks M questions about school (Will I make little circles at school?" M does not answer directly) M tells him that at school the teacher, unlike O will beat him if he doesn't do as he is told. TC attempts to change the subject, talking about fishing. M tells him that children who do not do as they are told in school cannot go fishing. TC makes marks on a piece of wood he picked up to play "fishing". M tells him not to write there, to write in his notebook (cuarderno). TC appears not to understand the term. M tells him to write in his "libro". TC picks up his steno pad and writes (1 minute). He complains of a headache. M gives him permission to lie down, but tells him that children with headaches are not allowed to go fishing.
Field Notes April 3, 1981 Interactive (20 min.) Literacy Techniques and Skills	TC and M had been telling O about their stay in Los Angeles. TC tells M that he wants to take a nap. M tells him that he must write or Observer will leave. TC agrees to write but wants M to show him how. M tells him he knows how. TC begins making circles on a page in one of his notebooks. (1 minute)

M apparently does not feel TC is writing just right. She takes the pen and shows him (while he holds the tablet) how the circles should be made (she goes left to right, one line at a time, but does not verbalize this) (30 secs.) Then TC "writes" following M's example (4 min.) while M and O chat.

Four minutes later, M notices that TC is making circles at the bottom of the page instead of the top. She takes the paper and pen and shows him the top left of the paper, telling him that one always begins at the top and goes from top to bottom. As she explains, she also shows that one goes left to right as one travels down the page (though she does not verbalize this).

TC makes more circles. Seven minutes later, TC wants to stop. M tells him no. Observer tells them that she must leave soon. TC continues writing at M's insistence. Observer leaves.

Clearly the mother's work is not wasted. In the following event TC demonstrates what he has learned through teaching <u>another</u> child how to "write."

Field Notes
April 30, 1981
TC - NonLiterate
Interact (7 min.)
Literacy Techniques

TC has been busy writing his circles. Upon observing him, Liz (a 2 year old visitor) asks M for paper and pen. She makes marks on paper (2 min.). Then TC tells M that Liz is not <u>writing</u>, she is <u>scribbling</u>. M tells him that Liz is still very young and cannot do as well as he. TC attempts to show Liz how to do it. He tells her (trans.) "Not like that! That's junk!" TC then shows Liz how to properly hold the pen, then how to make a row of neat little circles (1 minute). Then both children "write" for 5 minutes).

Over the course of the study it became increasingly clear that many of the businesses and institutions of society exert a strong influence on literacy practices of low-income people. Besides using print to carry out "official" and routine activities of life, it is also involved in the recreational activities (seen in the domain of Entertainment) of the people who participated in the study. Many of the businesses in United States society

design and distribute print material for use during leisure time activities. The proliferation of print for entertainment includes such items as children's and adult games, instructions and rules for playing games, comic books, paper back books, all varieties of TV listings, some TV game shows, the theater guide, etc. In the United States the production of print for entertainment purposes can indeed be a very profitable enterprise.

With such a wide availability of print for entertainment, Americans at all income levels are provided the opportunity to interact with print on a regular basis. In fact in the low income homes we visited during the past two years, entertainment represents the most frequent use of literacy. We have observed both children and adults using print materials to entertain themselves both alone and in interaction. Sometimes print was the source of entertainment such as novels, scrabble games, crossword puzzles, comic books, etc., and at other times it was used instrumentally such as the TV listings, and finally sometimes it was a focal part of TV programs.

Summary

Although our work shows the home environmet for literacy to be quite a bit like that shown by other researchers, there are two particularly important points to our research:

1) we focus on the importance of literacy events that do not involve children's books;

2) we find that social institutions, rather than specific sub-cultural practices, exert an organizing influence on the literacy events in a family.

Despite the obvious importance of literacy to everyday functioning in many different contexts(cf. Laquer, 1976), it has appeared plausible for reading environment researchers to concentrate mostly on cases where parents engage their children in reading in a deliberate and planned manner. Book reading, story book time and other experiences related to books are reported, as in Wells, 1981; Scollon & Scollon, 1979; Varenne et al., 1981. Although these events are the ones typically focused on when considering the child's preparation for school, they are not the only ones that occur. Our data shows that low-income children have considerable experience with print in addition to whatever exposure to books they experience.

In summary, we find that

1. Literacy is a major tool required for managing one's life in the United States.

2. The experiences a child has with print before entering school are organized by and result from the activities, involving print, which the child's parents and other literate family members carry out in the presence of the child. These seem directly linked to society. Therefore the quality of a child's school performance with literacy is related to the societal experiences of their parents.

3. Literacy is a tool used by a literate person according to the ecological or circumstantial need for its application.

4. Literacy is a motivated practice (externally motivated) which exists semi-independently of language development. Its development parallels the need for it in a person's environment and it is appropriated or learned not simply taught.

5. Children probably first see the instruments of literacy as discriminant stimuli (objects) in the environment which arouse their curiosity and their actions to master them. Children see literacy instruments being used on the average of 80 min. per day, every day of their lives. Children probably develop action schemas (or scripts) for these techniques and skills as well as concepts of proper functional applications of literacy, just as they do for other highly freqent activites in which they are involved. (cf., Ferreiro for a Piagetian view of this process with respect to literacy and Nelson and French for a view of the process in general.)

6. Ethnic differences seems to be only marginally implicated in the variety, frequency and duration of print encounters.

7. Preschoolers seem to model their literacy environment and they involve print in their play and interactions with others.

8. Little girls live in homes where more literacy occurs and they interactively participate in more literacy events.

9. Parents can more frequently and directly involve their preschoolers in the use of literacy. That is, there are occasions of literacy from which children are excluded, and literacy events are begun but stopped before they are in some sense "finished".

10. Economic status may exert a stronger influence on literate practice than ethnic culture.

Chapter V

Implications

The results of this study are especially important given some recent trends in thinking about the usefulness of literacy for low-income Americans. There has been a narrow emphasis on one particular set of literacy activities i.e., storybook reading and homework. When literacy is equated with books only we find research reports that say lower-class families engage much less frequently in these activities than do middle-class families. When we turn to studies of other types of literacy events, the little evidence available in the literature also leads to the conclusion that lower class families are not literate. Except when special constraints are in effect (such as a civil service examination) people with little or no literacy skills get by, using their general knowledge and social arrangements. Indeed, critics of recent literacy research (Nunberg; 1981) raise an interesting question: If people don't use literate skills outside narrow technological realms, why worry about making people literate at all? Our data suggest that literacy is not a tool used only in narrow technological realms. Rather, literacy is a powerful tool for engaging in many activities in many domains. This finding provides several suggestions regarding home interventions and future research.

Home Interventions

With literacy being used as a tool for engaging in such a wide range of activities in low-income homes it seems that there is a great deal parents can do to help their child develop in literate practice. However, informal conversations with parents suggest to us that two perceptions serve as

barriers to parents actualizing the literacy teaching potential of the home. These parental perceptions involve (1) the role of the school and (2) the role of routine home activities in teaching children to read and write.

Perception of school. Comments made during informal conversations between parent and researcher as well as observations of what parents say and do with other children in the environment lead us to conclude that all of our parents believe that "good" literacy skills are not only instrumental to but essential for achieving success in school. Moreover, these conversations and the activity we observed in the domain of Literacy Techniques and skills assures us that the parents who participated in the study want to help their children do well in school. However, the first barrier to the home becoming a more effective literacy teaching/learning environment is indicated in parents communicating to us in various ways that they do not feel possess the necessary competence to be effective teachers of literacy for their children. These parents believe that school teachers are much more capable of teaching literacy because of their special training. Therefore, teachers and schools are viewed as the experts and the only legitimate source of literacy training for their children.

When we consider the operation of this perception it is not surprising to observe that, when parents did consciously attempt to help their children learn to read and write, they organized literacy experiences for their children which seem to reflect the parents' perception of the way school would teach literacy. Clearly, this approach can only be as good as the parents' perception of the relevant dimensions and details of the schools' methods. Unfortunately, the parents' perception of the power of the school seems to

have placed parents in the position of having to model the school in order to teach their children to read and write, and at the same time to minimize their own ability.

In many cases these parental perceptions are mistaken. If we assume that data from this study provides a true indication of what typically goes on in the homes of low-income children, then the routine activities of parents and other literate people in the child's environment can serve as viable contexts for teaching children to read and write. In order for this to occur, parents need to realize that they probably create potentially very effective literacy environments for their children and that the definition of an effective environment is not necessarily one that is "school-like." Parents could profit from understanding the implications for teaching literacy of the range of activities they normally carry out. Moreover, it would be useful for parents to understand the value of and the means by which they can maximally exploit the literacy teaching potential of those literacy practices they enact on a regular basis. This, of course, brings us to the second perceptual barrier to the home becoming a more effective literacy teaching/learning environment.

Perception of routine home activities. When parents in our sample go to the market using a shopping list, cook from a recipe, read the Bible, or use the TV Guide, they do not seem to consciously conceptualize these activities as "going to the store," "cooking," "studying the word" or "watching TV." Parents seem to think about what they are doing in terms of the larger activity, not in terms of the instrumental "steps" involving reading and/or writing that are embedded in the larger activity. Therefore, it is not surprising that the parents in our sample don't seem to realize that portions

of these activities could be turned to their child's benefit. Indeed, a comparatively large amount of time in the domains of Daily Living, Religions and Entertainment is spent doing literacy within the view of the child, yet there is little effort on the part of the more literate person to include the child or create a teaching/learning context. Nor do more literate people say very much which explicitly labels what they are doing as reading or writing or make explicit the various social and cognitive functions of the literacy used in the activity.

Clearly, what people do in the domains of Entertainment, Daily Living, Literacy Techniques and Skills and School Related activities create the opportunity for children to come to know a great deal about literate practice. Over all families, these four domains of activity account for a total of 79.8% of the literacy events we observed. (It should be noted that print also frequently mediates religious activities in homes where an organized religion is practiced.) Our data indicates that activities in these domains represent occasions with high potential for children to learn about literate practice.

Specifically, if literates would more frequently initiate activities in the domains of Literacy Techniques and Skills and more frequently involve preschoolers in the domain of School Related activities these events could provide the child with both interactive and supervised experiences which focus on helping the child to develop the mechanical and technical skills in available through activities carried out in other high frequency domains. The literacy events which the child primarily observed in the domain of Daily Living activities place heavy emphasis on using literacy to manage the daily affairs of life. Those literacy events which occur in the Entertainment

domain emphasize the use of literacy for recreation. Also important is the fact that many of the events in these four domains, as well as many of those in the Religious domain of activity, contain actions and operations that a cognitive psychologist would describe as instantiations of problem solving, planning, decision making and memory operations.

The benefit for the preschool child of these dimensions of home events could be accomplished by eliminating the perceptual barriers of the parents. The objective of home intervention should focus on (1) making parents aware of the literacy teaching potential of their daily activities (2) increase parents sense of competence regarding their ability to be effective teachers of literacy for their children and (3) provide parents with procedural information and strategies which will allow them to actualize the literacy teaching potential of events embedded in their normal daily activities. For example, for younger preschoolers, parents could consciously and verbally label the literacy steps in their activities as reading and writing as well as specifically for the child the social and/or cognitive functions of the literacy. For older preschoolers, parents could reorganize occasions when they are reading or writing to include the child so that these occasions become interactive literacy teaching/learning situations which focus on techniques and skills, social functions or cognitive functions involved in that particular use of reading and/or writing.

The results of this study suggest a different approach to home intervention. Given that we see families engaging in a variety of literate practices, with connections to social institutions, if we want to reach children in their homes in a manner that will facilitate the development of literacy practice we

would be well advised to focus on the social institutions which serve as the origins of the literate practices they observe. With this focus we could introduce interventions through the social institutions where print originates. Thus we would concentrate on intervening through daily living, entertainment, school related and religious activities using the particular organizations and institutions which are the source of these activities in the home as the particular medium of intervention.

Continuing Research

Our continuing research has concentrated on developing a Literacy Event Observation System, a LEOS that takes advantage of the home research reported above and provides for a way to examine many aspects of the cross-situational variety in the environment of reading. The LEOS is based on the following notions:

1. The literacy event is an occasion that is well marked in time and is easily observed, so it has a lot of potential for detailed study. Generally speaking, the literacy event has two kinds of attributes; (a) Global features which include the dominant theme of activity and other aspects of the context (b) specific features which include materials, participants and actions/operations.

2. The Literacy Event Observational System reflects these features. It also provides a general framework for locating the literacy event within a socially constructed context and examining its links to the other elements represented in that context. In other words, LEOS allows one to specify a wide range of contexts in which literacy is practiced, both home and community contexts as well as school contexts, and the links between these contexts.

3. The Literacy Event Observational System focuses on two aspects of the structure of the literacy event. (a) LEOS focuses on the relationship between events and the relationship between events and context. (b) LEOS focuses on the relationship between people within each literacy event revealing the patterns of actions/operations which occur between people across literacy events and over time.

It appears that the LEOS will have interesting payoffs, allowing us to arrive at some more subtle understandings of reading. For example, an application of LEOS to the data reported above has detected that, within the home settings of the present sample, it is most typical that a literacy event is neither preceded nor followed by another literacy event. However, there are several occasions when one literacy event is followed by a second literacy event and then a third and so on. Moreover, there are several occasions when literacy Event A stimulates a parallel (in time) literacy Event B on succeeding days. Further analysis will allow a specification of what the contextual circumstances are that organize these three types of relationships between literacy events. If an advantage to sequencing structures in a particular way or sequencing structures of a particular type shows up in studies of later consequences, for the child, we will be able to consider whether we are in a position to adjust the circumstances to achieve the advantage more frequently. Hence, we will be able to complete our investigations with training studies to establish a causal link in our chain of reasoning (cf. Bradley and Bryant).

Future Research

We have achieved a certain level of coherence in our present study. That is, we have observed and described regularities and patterns which exist in our current data. However, we have not achieved a level of coherence that we are satisfied with because we are lacking a comparison sample. If we conclude our work at this point we will have provided a description of coherent patterns of literate practice at the low-income level without providing what we feel is an adequate interpretation of these patterns. More information is needed to elaborate our approach through comparison with a middle-class sample

and subsequent follow-up on other lower-class samples.

There are some very important issues which still require informed responses. For example, is the average level of literate practice we observed typical for the middle class? We know from a variety of sources that middle class parents read books more, but is that practice alone the critical factor which accounts for the performance differences that show-up in school between low and middle income children? We doubt that. A more promising hypothesis is that middle class parents carry out significantly more actions across the nine domains of literacy activity. This increased frequency creates both an increased opportunity for the child to observe a greater variety of literacy events and an increased opportunity for parent/child interactions. We would also expect to see significantly more parent/child interactions being organized to actualize the literacy teaching potential of the home environment. If it does in fact turn out that middle-income children have a greater variety of experiences with literacy (across the nine domains), then we need to devise a means of testing the cognitive consequences of literate activity within each domain of literate practice we have identified, to determine the overall impact of home literacy practice.

We have noticed that children will interact with any print that is put "in their way." Therefore, we think there is a need to carry out research designed to test the usefulness of introducing attractive literacy activities as part of the packaging of products used in the home. We believe that such a use of breakfast cereal containers, for example, could provide a subtle intervention which could possibly and significantly increase children's interactive involvement with print in the course of their everyday lives.

Our analysis suggests that many routine activities of parents involve useful cognitive operations. Therefore, a program of applied research should be implemented which is designed to increase parent and child interactions with print routinely involved in the adult's daily activity. This developmental program should focus on providing parents with information and procedural suggestions. Specifically, to educate parents about all the things they routinely do that involves literacy, as well as the educational potential of those activities for their child. Simultaneously, some of the ways they can integrate actions into these routine activities which will help their children learn to recognize letters, learn the memory function of print, etc., could be demonstrated.

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APPENDIX A

Literacy Event Observational System

Coding Dimensions

Column 1

Location

This dimension identifies the location of the people at the time the literacy event occurs. The specific locations and the appropriate code for each are listed below.

Code

1 for family room - this is typically the place where the television is located. It can be a room designated as the "family room" by the family members or what is normally referred to as the living room.

2 for kitchen/dining room. The place where meals are prepared and/or eaten.

3 for rest of home. This would be any other location in the home.

4 for church. This is self-explanatory.

5 for market. This is also self-explanatory.

6 for other. When a literacy event occurs in any location not mentioned above score it a 6. Examples would be, the bus stop, the laundramat, a restaurant, etc.

Column 2

Dominant Theme

The literacy event functions not as an isolated event of human activity, but as a connected unit embedded in a functional system of activity. Literacy events occur within particular contexts, i.e., within particular socially assembled situations. Literacy contexts are partially constituted of actions

that cluster around or can be described in terms of definitional labels provided by society, e.g., shopping, getting welfare, playing games, doing homework, etc. These various actions fit into networks of activity that can be labeled according to the common function of the activities. It is therefore possible to identify each literacy event according to the dominant theme of the activity within which the event is embedded. The specific themes and the appropriate code for each are listed below.

Code

1 for Daily Living Routines. Code literacy events into this domain that are embedded in activities which constitute the recurrent practices of ordinary life for the family: obtaining food, maintaining shelter, participating in the requirements of social institutions, maintaining the social organization of the family, etc. For example, literacy events which appear in such daily living activities as shopping, washing clothes, paying bills, getting welfare assistance, preparing food, getting the children dressed, etc.

2 for Entertainment. Code literacy events into this domain that are embedded in activities which passed the participant(s) time in an enjoyable, constructive or interesting manner. The coder should expect literacy to occur in a wide variety of activities in this domain. However, depending on the activity, literacy itself may be (1) the source of the entertainment (reading a novel or doing a crossword puzzle), (2) instrumental to engaging in the entertainment itself (reading the TV Guide to find out what programs will be on, reading the rules for parlor games), or (3) a facet of media entertainment (reading which occurs in the course of a television program or film).

3 for School Related. Code literacy events into this domain that are embedded in activities which are directly related to the institution of the school. In most cases the particular material serving as the focal point of the event will come directly from the school. In other cases the direct link to the school will be provided by the participants in the events labeling their ongoing activity as being school related. For examples, code literacy events in this domain when siblings are "playing school" or when parents are getting their children "ready for school" or when parents are helping their children "do better in school." Parents or siblings

will organize these types of events around workbooks purchased at the supermarket or other literacy technology such as tablets and cut-out pages of magazines.

4 for Religion. Code literacy events into this domain that are embedded in activities which are directly related to religious practices. A distinguishing feature of literacy events which occur in this domain is that they typically involve more sophisticated literacy skills than do events in most of the other domains. For example, it is not uncommon for these events to require individual or group text analysis skills as a part of Bible study sessions.

5 for General Information. Code literacy events into this domain that are embedded in activities which can be most accurately labeled as accumulating general information. The information being accumulated covers a wide range of topics and may or may not be used at some future time.

6 for Work. Code literacy events into this domain that are embedded in activities which are directly related to employment. In most cases the literacy events in this domain are associated with producing a product, performing labor or providing a service which is exchanged for monetary resources. However, in some cases the literacy event will be associated with either gaining or maintaining the opportunity to earn money in this way. For example, reading the want ads in the newspaper.

7 for Literacy Techniques and Skills. Code literacy events into this domain where reading and/or writing is the specific focus of the ongoing activity. Thus, print is embedded in activities specifically organized to teach/learn literacy techniques, skills or information. These events are sometimes initiated by a literate person but more frequently they are initiated by the target child. In either case, however, at least one and sometimes both participants in an event are required to shift abruptly out of some unrelated ongoing activity in order to participate.

8 for Interpersonal Communication. Code literacy events into this domain that communicated with friends or relatives using print, usually in letter form.

9 for Story Book Time. Code literacy events into this domain where a caregiver reads to a child or children in the family as a part of the caregivers routine activity. Of course, not all events in which a caregiver reads to a child involve narratives (stories). Typically books involved in these events are alphabet books or books which have objects pictured with their corresponding labels; such materials contain no story

line as conventionally understood. However, the category storybook time, includes such reading and emphasizes the planned regularity of the event.

Column 3

Time of Day

This dimension locates the literacy event within the three major time periods of the day; morning, afternoon or evening. The specific time periods and the appropriate code for each are listed below.

Code

1. 8:00 a.m. to 12:00 noon
2. 12:00 noon to 6:00 p.m.
3. 6:00 p.m. to 12:00 midnight

Column 4

Who is in Room

This dimension identifies the people in room at the time the literacy event occurs. It is important to note that for coding purposes that you should only be concerned with those people who could potentially participate in the event with the target child or that the target child could observe. For example, riding on a bus or attending church, all the people present are not potential interactors. You would confine your designation of "who is in the room" to those who are in the immediate vicinity of the child.

Each person is identified according to their literate ability. Specifically as either, (1) literate (L), (2) pre-literate (PL) or (3) the target child him/herself. The term literate, as it is used in this coding scheme, specifies a person's ability with print as follows; "a person is literate who can with understanding both read and write a short, simple statement on his/her everyday life" (UNESCO, 1951). Everyone whose ability with print either meets or exceeds this fundamental limit is to be considered literate. All others are to be considered preliterate. The specific combinations of people in the room at the time of the literacy event and the appropriate code for each are listed below.

Code

1 for target child alone

2 for target child and a preliterate person

3 for target child and two or more preliterate persons

4 for target child and a literate person

5 for target child and two or more literate persons

6 for target child and a preliterate person and a literate person

7 for target child and two or more preliterate persons and a literate person

8 for target child and a preliterate person and two or more literate persons

9 for target child and two or more preliterate persons and two or more literate persons

Column 5

Immediately Prior Activity

This dimension identifies the ongoing activity immediately prior to the literacy event. "Immediately prior activity" is differentiated into two broad categories. Either that activity was a literacy event or it wasn't. That activity is considered a literacy event if it conforms to the following definition. A literacy event is defined as any action sequence, involving one or more persons, in which a person produces, comprehends, or attempts to produce or comprehend written language. All other human activity is considered, for purposes of this coding system, non-literacy events. The specific categories and the appropriate code for each is listed below.

Code

1 for literacy event

2 for non-literacy event

Column 6

Initiating Action(s)

This dimension identifies the action or actions which introduce print into the activity. These actions fall into one of two general categories defined as either facilitation or control. Generally speaking, facilitation focuses upon making it easier for a person to participate in print mediated activity. Specifically, one person will supply material, structure the task or provide technical assistance, etc. for him/herself or another person. On the other hand, and generally speaking, control focuses upon the exercise of restraining, directing or guiding influence over elements in one's environment. Literacy events typically have their origin in one or the other of these

actions. However, it is necessary to note that, regarding literacy, facilitation and control are not necessarily negative actions. Rather they indicate the successful and near successful attempts of people to effectively interact with aspects of their entire material and human environment. Examples drawn from field notes will serve to illustrate these two categories of action. Panel A presents examples of facilitation and Panel B, examples of control. It should be noted that Example B-1 presents an instance of both.

Panel A

(1)

5:25 The TV show mother and TC have been watching is just about to go off when Mother decides that now might be a good time to "have school." M sets up the Magic Erasable Writing Board (plastic card board approximately 12 x 18, with faint green lines printed across it) which M had bought for TC.

TC begins trying to write a Z, gets frustrated. M writes a Z, says:

M: There's a Z

TC: Z.

TC makes A.

M: That's a nice A. You could make them smaller so they fit in the lines.

(2)

M, F and TC have just arrived back from F's father's. They carry in some things and get settled. F sits in a chair in the living room and immediately begins reading directions for playing backgammon. (M in kitchen getting lunch ready) TC in living room playing with toys.

(3)

TC has been picking things up in preparation for watching Sesame Street. She finishes ahead of time and begins to color. She opens her color book upside down. She recognizes one picture (book still upside down), says "ice cream man". Mike (12 yr. old) asks TC what S-O-D-A spells (also printed in picture.) TC says she doesn't know. Mike gives her a clue--its something you drink". TC is not interested. She asks for marking pens so that she may color the picture.

Panel B

(1)

1:36 S: Ma, Help me with my spelling words

M: Let me see them.

S: (Hands a spelling list to M)

M: (Examines the list of spelling words) Okay, we're going to do these like we always do. You write each word five times and when you finish I'll give you a little test.

(2)

M is in living room watching TV. TC is playing with toys on floor. M looks at TV Guide, then changes channel to Dionne Warwick special.

(3)

Family has been hanging around. TC shows O one of sister's (Becky ? years old) school papers, says "Look, O, Becky's.

M (to TC): Do you know what letter that is?

TC: Letter

M: P

TC: P

M: Yeah, that's right...letter P. You know what starts with letter P- pain in the butt-pug face.

TC: Yeah, letter P.

Brother re-enters room TC distracted, watches TV.

(4)

Mother is watching soap operas. TC is on the floor playing with her "pop-up" game (Perfection) when she notices a pencil and paper Kathy had placed under the sofa. D crawls over and pulls them out, then she begins to scribble. After about 2 minutes of this:

TC: Ma, I can't write my name.

M: Shh

TC: (Continues to scribble alone)

M: (1 min. pass and a commercial comes on) What did you say Delores?

TC: Nothing

M: You just said something about your name.

TC: Will you write my name?

M: No, but I'll help you. Bring me the paper.

Literate actions are composed of a sequence of literate operations. Some of these operations are competently handled by TC, other steps in the sequence are beyond the child's ability to perform. Very often, as Example B-4 illustrates, children are successful in recruiting a more literate person into the activity to perform the needed operation. These occasions represent instances of young children controlling aspects of their environment. The specific categories and the appropriate code for each one is listed below.

Code

1 for Literate Facilitates

2 for Literate Controls

3 for TC Facilitates

4 for TC Controls

5 for Preliterate Facilitates

6 for Preliterate Controls

Column 7

Recorded Activity

This dimension identifies the focal event, that is, the event described in the field notes as fitting into one of two broad categories. The recorded event is either a literacy event or it isn't. The definition of a literacy event conforms with that used in column five (5). The specific category and the appropriate code for each category is listed below.

Code

1 for literacy event

2 for non-literacy event

Columns 8-9

Who is Involved in the Literacy Event

This dimension identifies the people who participate in the recorded literacy event. Each person is identified according to their ability with print. Specifically they are identified as either; (1) literate, (2) preliterate or (3) the target child him/herself. The definitions used for this dimension conform to those used in column four (4). The specific combination of people involved in the recorded literacy event and the appropriate code for

each is listed below.

Code

1 for literate alone

2 for target child alone

3 for preliterate alone

4 for two literates interacting

5 for a literate person and the target child interacting

6 for a literate person and a preliterate person interacting

7 for the target child and two or more literate persons interacting

8 for the target child and a preliterate person interacting

9 for the target child and two or more preliterate persons interacting

10 for the target child and a literate person and a preliterate person interacting

11 for any combination of people interacting without the target child participating in the interaction.

Column 10-11

Materials

This dimension identifies the materials interacted with during the literacy event. Each category should be self explanatory. The specific categories and the appropriate code for each one is presented below.

Code

1 for book of any type

2 for periodical of any type

3 for miscellaneous material (e.g., letters,

pamphlets, recipes, rules, etc.)

4 for any type of label

5 for any type of educational material

6 for any type of material related to the institution of the school (e.g., application forms or notes and announcements sent home from the school)

7 for games and toys

8 for paper and pen or pencil

9 for paper and crayons

10 for any type of bureaucratic form (e.g., job application, welfare forms, etc.)

Column 12-18

Actions of Each Participant

This dimension identifies the particular literacy operations and actions as well as the non-literacy actions, where appropriate, performed by each participant in the literacy event. We are particularly interested in the configuration of participants which involved a literate person and the target child in interaction. This participant structure provides the opportunity to examine "teaching" events. In general, these interactions should be coded from the point of view of the literate person or teacher.

We define teaching as interactions which are organized specifically to communicate some type of information (e.g., techniques, skills, values, etc.) about literate practice. Often a particular discourse structure is employed to accomplish the "teaching." The "initiation-reply-evaluation" (IRE) sequences is widely considered the critical component of the teaching event. Typically, the literate person initiates the interaction by asking a question

(to which they know the answer), the child replies, and this reply is in turn evaluated by the literate person. A few examples from field notes will serve to illustrate IRE lessons.

Literacy Event A

Larry was in his room playing alone when his mother brings the target child a poster for them to put up.

Mother: "Where do you want it?" (As she unrolls the poster.)

TC: "Right there."

Mother: "What does it say>" (As mother finishes pinning poster to wall)

TC: "Kermit the frog."

Mother: "No there's no (meaning "no word") frog up there. Where's the 'F'?"

TC: "I don't know."

Mother: "It just says (Mother runs finger under print on poster) Kermit."

TC: "Yea."

Literacy Event B

Dad is babysitting with D and has just finished reading the "Three Bears" to D (non-interactively). When they are finished Dad selects an ABC book from a stack of two sitting on the sofa to their left. He opened the book and the following occurred: (excerpted from a longer interaction)

D: Now what letter is this? (points to A)

De: It's a secret

D: Well, you can tell me

De: A!,A!, A

D: Allll1, Riiiight! Now, you remember that.

De: O.K. Daddy

D: O.K. We'll do some more later.

Dad closes the book and turns on the TV. D continues looking at book for about 3 minutes. Then she gets on the floor with her perfection game and begins playing with it.

In contrast to IRE lessons, non IRE lessons center more around the functional use of print than the techniques and skills involved in the production of print (e.g., print can be used to label things or to aid in finding things, etc.). Non IRE lessons may also present the child value statements regarding literacy (e.g., "writing is better than playing") or alert the child to the fact that literacy is an operation that is distinguishable from other operations that can be performed with the same utensils (e.g., "I want you to write not draw"). Again, an example from field notes will serve to illustrate non IRE lessons.

TC and M interactively draw pictures. TC requests that M make a boy. M draws one body part at a time, announcing which it is and when finished with drawing says:

M: Now we'll write boy.
(and prints BOY over top of drawing)

Same with Mama. (TC now participates in labeling of body parts). Repeat with Erin. And Dad.

From time to time M tries to opt out of this

activity but TC keeps drawing her back in, making her write/draw for TC. M wants TC to write/draw for herself.

At end of activity M puts TC's name on paper "so everybody will know who did it."

Teaching events should be differentiated into these two categories of lessons; IRE and Non IRE. All other actions of participants should be self explanatory with the possible exception of connected discourse. "Connected discourse" refers to a sequence of written words constructed into one or more sentences. The specific actions involved in the literacy event and the appropriate code for each is listed below. Each participant in the literacy event should be assigned one code in the appropriate column. If a person is present in this room but that person is not involved in the literacy event code a zero (0) into that person's column.

Column

12 for target child

13 for preliterate number 1

14 for preliterate number 2

15 for preliterate number 3

16 for literate number 1

17 for literate number 2

18 for literate number 3

Code

1 for letter recognition (reading)

2 for letter writing

3 for read word(s)

4 for writes word(s)

5 for read connected discourse

6 for writes connected discourse

7 for teach (IRE)

8 for teach (Non IRE)

9 for listens

10 for observes

11 for other non literate action

Column 19

Outcome/Source of Termination

This dimension identifies the operation or action which marks the termination of the recorded literacy event. Generally speaking literacy events are well marked by a beginning and an end. That is, literacy events are generally preceded by activity that is not mediated by print and followed by activity that is not mediated by print. That action sequence which is mediated by print is the literacy event. However, in certain instances, some action embedded within one literacy event A will trigger literacy event B or something which co-occurs with literacy event C will cause literacy event D to begin. Therefore, the coder should use the following guidelines to determine where one literacy event ends and another begins. In general a literacy event is defined by (a) one of two general literacy actions (reading or writing), (b) participants in the literacy event (see columns 8-9 above), and (c) the literacy materials involved (see columns 10-11 above). When two or more of these facets changes, the coder should consider that a new literacy event has

begun. These guidelines will be useful in determining whether one literacy event is terminated by the beginning of a second literacy event.

Here is an example of such an extensive/embedded literacy sequence. We present the write-up from field notes and then discuss how the coding of such sequences should be approached.

> 1:28 S comes home from her first day back at school after a long absence due to illness. S comes into the kitchen and finds M chatting with O at the kitchen table. S shows M all of the homework she has to do as a result of her absence from school. S and M discuss the amount of work to be done, the subjects and when it is due back to the teacher. S wants to go out and play but M decides that they will get started on the work "right now." M asks S to decide what she wants to do first (i.e., "what do you want to start with."). As S begins to sort through the material (apparently to decide what she wants to start with). M leaves the kitchen and returns (followed by TC), with two versions of the Bible, Aid to Understanding the Bible, a pen and a tablet. M informs O that since she is going to be helping S, she might as well write a letter to one of her church brothers who lives in Arizona. When M returns to the kitchen S says to M,
>
> 1:36 S: Ma, help me with my spelling words.
>
> M: Let me see them.
>
> S: (Hands a spelling list to M)
>
> M: (Examines the list of spelling words) Okay, we're going to do these like we always do. You write each word five times and when you finish I'll give you a little test.
>
> 1:38 With this statement M hands back the list of words, tears off a page from her tablet and gives it to S and S begins writing the spelling words. TC, who followed M back into the kitchen, has been watching and listening throughout the interactions,

now asks M for a sheet of paper and a pencil. M gives TC a sheet of paper and S gives her a pencil. M then starts writing her letter, S begins writing her spelling words and TC starts producing marks on her page.

1:42 M opens her Bible for the first time. M is flipping back and forth through about eight pages. Then she finds what she is looking for and directly copies a passage from the Bible into the letter.

1:44 TC writes for several minutes until her younger brother comes into the kitchen carrying TC's bat. A struggle for possession ensues causing M to stop her letter writing activity in order to settle the dispute. Then M goes back to letter writing. As M continues writing the letter she pauses twice more to search for and use quotes from the Bible.

2:03 S tells M that she's ready to take her spelling test. M stops letter writing to recite the spelling list. After reciting each word, M would pause and S would fill the pause by verbally spelling the recited word. While going through the list M varied the order of presentation from the way the list was constructed and the way S had practiced writing them. S spelled each word correctly and M rewarded her with praise. M and S repeated the list three times in succession before M suggested S do some math.

2:13 After giving S the spelling test M goes back to letter writing for about 15 minutes. The event ends when M stops to chat with O.

Such sequences raised important issues for the concept of literacy event. In some general sense this entire period was an extended literacy interaction. However, we wish to break it down to its component parts.

In the example just presented, we used the criteria stated above to partition the sequence into the following five literacy events:

Event 1: Literates Interactive (10 min.) S and M (TC's mother) review and discuss homework materials.

Event 2: Literate Alone (25 min.) S studies list of spelling words.

Event 3: TC Alone (6 min.) N writes names on a sheet of paper.

Event 4: Literate Alone (40 min.) M writes letter to a friend and reads the Bible. Event alternates with settling a dispute and giving a spelling test.

Event 5: Literates Interactive (11 min.) M (reads) recites list of spelling words to S. In turn S orally spells the list of words.

The critical events in this sequence are those which involve the homework. First, because the homework itself seems to have set in motion this entire sequence of events. As important, however, is the question of how many events occurred during the interaction between mother and her seven year old daughter. The answer, as we have indicated above, is that there are five different but related literacy events embedded in this extended interaction.

The opening event in the sequence involves mother and daughter reviewing a range of school related materials (spelling exercises, math exercises, phonic exercises and word recognition exercises). Both participants are reading and discussing the material. After several minutes of this activity mother leaves the room, which changes the participant structure. However, for two reasons the event continues; (1) the reviewing (reading) of this same material continues, (2) even though mother leaves the room, her question, "what do you want to start with?" is a continuation of the interaction. This interpretation is supported by S's direct response to the question when M returns to the room (i.e., "Ma, help me with my spelling words"). This event ends when the interaction becomes more focused around a single spelling list. The focus allows M to prescribe definite steps for S and sets up the next

event.

Event 2 can be differentiated from Event 1 because of a change in participant (from literates interactive to literate alone) and a change in the literacy actions (from reading to reading and writing). The isolation of Events 3 and 4 from the others should be obvious. Both TC and mother are working alone (independently) using different sets of material to accomplish different ends.

The difference between Event 1 and Event 5 is not quite as obvious as the differences between the other four events. The basic question is; how can Event 5 be considered as separate from Event 1, especially since we see the same material and the same participants in the two events. The answer focuses on the material. Even though the spelling list was involved in both events, it was used differently with different consequences for action in the two events. In Event 1 the spelling list began as just another printed sheet among many (functioning in much the same manner as would a single page in a book). When the list was eventually singled out it functioned only to organize the next literacy event for S. In Event 5 the list functions as the focus of the event and organizes the entire interaction into an initiation-reply-evaluation sequence (discussed above). Moreover, this different function of the material results in different literacy actions being carried out by the participants. This is especially true for S. In Event 1 both participants are simultaneously reading and discussing the same material (this is a review session). In Event 5, M reads then recites each word on the spelling list while S orally renders the spelling of each word recited by M (a test situation). Thus the difference between the two events results from changes in

material and changes in literacy actions.

The example presented above also provides illustrations of three other ways that a literacy event can be terminated. Event 3 was terminated by the interruption of an outside person, Event 5 was terminated by completion of the task, and Event 4 was terminated by the voluntary departure (from the task) of the participant in the event. The specific sources of termination of the literacy event and the appropriate code for each is listed below.

Code

1 for literate event

2 for voluntary departure by one of the participants

3 for interruption by an outside person

5 for task completion

Columns 20-22

Duration of Event in Minutes

This dimension identifies the duration of the literacy event defined in minutes. The duration of a literacy event is considered to be from the beginning of the activity mediated by print to the end of the activity. The coder should note that print need not mediate every single second or operation of an activity in order to arrive at a determination of the duration of a particular event. Again examples from field notes should serve to illustrate this point.

Literacy Event A

M is watching TV, TC is in and out
of the room. Dad reads the classified ads
of the newspaper, apparently looking for

job possibilities. As he reads he occasionally circles an ad. The event ends when Dad puts down the newspaper and goes out to get the mail.

Literacy Event B

M, TC and baby brother have just arrived at the grocery store. After they go in the two children are placed in the cart, and M does her shopping. M uses her list (constructed just before leaving home) as a reference for selecting certain items. On occasions she glances at particular labels and selects items quickly; at other times she reads labels carefully for a much longer period of time. TC spends much of her time playing with the items in the basket. As the family checks out of the market, M pays for the items with food coupons and signs her name to each of them. The event ends after the check-out operation is completed and the family heads home.

In the examples presented above the duration of the events were considered to be from the beginning of the activity which the literacy mediated to the end of the activity. In Event A above we see that the event lasted for 30 minutes and that there was literacy going on for the entire duration of the event. However, notice Event B above. Her the activity, "shopping" lasts for 25 minutes. Nevertheless, we should code it as a literacy event lasting 25 minutes because we consider that the activity itself with its associated motives, goals, and operations is the fundamental unit of analysis. Therefore, we should consistently code duration as the time involved from the beginning to the end of the activity.

Columns 20-22 should be used to code the number of minutes involved in the particular literacy event being coded. If an event lasts for 5 minutes, for example, it should appear on the coding sheet as 005. Ten minutes should appear as 010 and two hours should appear as 120.

An Application of LEOS

In this section we present an example of the kind of analysis and interpretation which is made possible by LEOS. The focus here is on the child's contextual knowledge. Specifically there are two questions: 1) what is it that the child does in alone activity that is similar to what a literate person does in alone activity and 2) how do these actions of literates influence the actions of preliterates. The strategy was to examine "who is involved" in the literacy event by the five variables listed below.

Specifically: 1) whoinvol x material
2) whoinvol x ActL1
3) whoinvol x ActTC
4) whoinvol x Outcome
5) whoinvol x Duration

The table below presents the results of a cross tabulation of the relevant variables. The chi square analysis of each section of the table was significant at the .001 level.

Insert Table About Here

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1) Focusing on who is involved in the event and actions of literate and TC when they are acting alone we see that: there is essentially no difference in the frequency distribution of literate action between Literate and TC. Thus, considering the criterion activity of reading and writing, the TC does in fact recreate in action this particular feature of adult activity.

2) Focusing on who is involved in the event and the material they use we see that there is a difference in the "material used" pattern between literates activing along and pre-literates acting alone. 90% of literate persons' actions in literacy events involve decoding and comprehending printed material found in books, periodicals, miscellaneous reading material such as labels, recipes, etc., and electronic media. On the other hand 65% of the pre-literate persons' actions in literacy events involved attempted decoding and comprehension of the printed material found in these same sources. The real differences in these patterns is found in the emphasis that pre-literate

Table 1

PERCENTAGES BASED ON FREQUENCY

		Event Participants		L/TC	
		Lit. Alone	Prelit. Alone	L	PL
Actions of Participant	Read	66.7	63.5	40.7	40.8
	Write	31.7	35.4	2.5	17.1
	Facil.	1.7	0.	48.1	1.3
	Other	0.	1.0	8.6	40.8
				L/TC	
Material	Books/ Periodicals	63.3	39.5	53.5	
	Misc. reading materials	25.8	17.1	20.9	
	Paper & Pencil	9.2	37.2	19.8	
	Elect. Media	1.7	6.2	5.8	
Outcome of Event	Literate	25	10.9	25.6	
	Non-literate	75	89.1	74.4	
Duration in Minutes	Less than 2	17.3	26.6	21.3	
	3 - 5	19.4	29.0	27.5	
	6 - 10	24.5	33.1	26.3	
	11 - 20	25.5	11.3	22.5	
	20 plus	13.3	0.	2.5	

persons place on using paper and pen or pencil to apparently attempt to produce written messages (32.2%). Literates much less frequently use paper and pen or pencil to produce written messages (9.2%).

This provides one strong indication that pre-literates have as much of an interest in producing written messages as they do in decoding and comprehending of written messages they find in books and periodicals. This is true in contrast to the fact that reading is the primary literate activity modeled for them in their environment.

3) Focusing on the participants in the event and the outcome of the event we see that those events involving a pre-literate child acting alone are less likely to be followed by a literate event than those involving a literate person acting alone. (It could be noted that the events involving literate/TC interactions have a pattern of outcome very similar to the literate alone pattern. This suggests that literates help move the pre-literate child closer to the literate pattern in interactions than the child performs on his own. This direction of influence is also evidenced regarding "material" used in literacy events, except that the pattern reverses with paper and pencil.

4) Focusing on the participants and the duration of literacy events we found that there is very little similarity in the frequency distribution of events in duration categories. However, here as in tables 22 and 23, the influence of the literate pattern on the pre-literate pattern can be noted. Considering literate/TC interactive events, it appears that the literate person moves the pre-literate person in the direction of more longer interactions with print than the pre-literate would perform acting alone. That is, pre-literates are involved in twice as many 11-19 min. events when they interact with a literate than when they act alone. However, considering these 11-19 min. events, the pre-literate initiates two events of this duration to every one of those initiated by a literate person. So we may conclude that if we see literate/TC interactive event lasting 11-19 min., it is more likely that the pre-literate initiated the event.